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FIRE AND WATER ENGINEERING *and* THE FIRE ENGINEER

JUNE 13, 1928

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Service stations strategically located

Fire apparatus for which you cannot immediately obtain parts is a liability. For a pumper "out of service" never put out a fire.

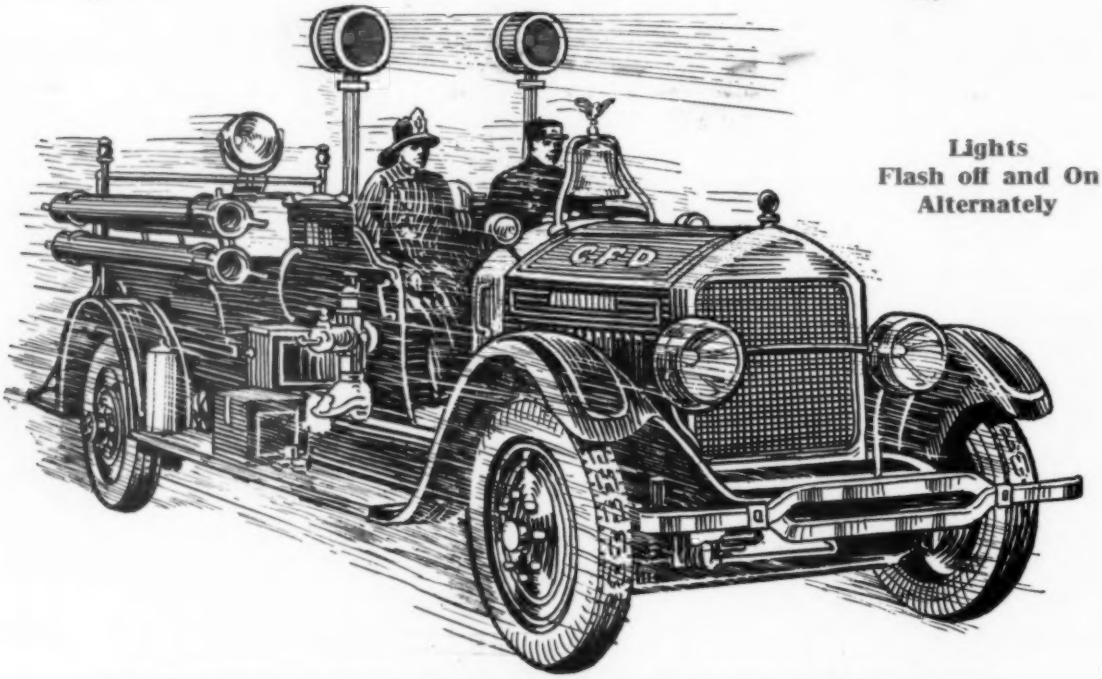
American-LaFrance Service Stations, a few of which are listed here, are strategically located. At these stations over half a million dollars worth of parts are held ready. When parts, or men to install parts, are needed, there will be no delay.

This is one of the many reasons why over 90% of American Fire Departments have American-LaFrance apparatus. Write for descriptive literature. American-LaFrance and Foamite Corporation, Engineers and Manufacturers, Dept. A8, Elmira, N. Y.

AMERICAN-LAFRANCE & FOAMITE PROTECTION

A Complete Engineering Service for Extinguishing Fires

HERE SHE COMES!



Lights Flash off and On Alternately

POSITIVE IDENTIFICATION WHEN YOUR FIRE APPARATUS IS EQUIPPED WITH

P-B RITE-A-WAY FLARE SIGNALS

NO DRAIN ON THE BATTERY—WORKS OFF OF THE INTAKE MANIFOLD

The installation of P-B Rite-A-Way Flare Signals will in no way impair the operation of the engine or effect any decrease in economy.

NO
- Adjustment necessary to carburetor.
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- Apparatus to arrive quickly.
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P-B RITE-A-WAY

SUMMED UP—(RIGHT OF WAY - RIGHT A WAY)

DEAR CHIEF: ACTION ON YOUR PART BY INSTALLING

P-B RITE-A-WAY FLARE SIGNALS

WILL SAFEGUARD YOUR MEN AND APPARATUS—SO SEND IN YOUR ORDER TODAY!

PRICE $48.00, F. O. B. FACTORY

P-B MANUFACTURING CO., Inc.

4221 Forest Park Avenue **Saint Louis, Missouri**

Yes!... We *Do* Make a Succession Fire Alarm Box!

FARADAY

It's *Approved* and *Used* by the New York City Fire Department

Moreover, this box is *guaranteed* to operate perfectly with any and all other makes of succession type boxes you may now have in service.

The reference book and catalog shown on the left contains complete information on the *advantages* of this box and of other fire alarm equipment we manufacture.

A *free* copy will be sent you on request.

Stanley & Patterson

Incorporated — Established 1884

150 Varick St., New York

The Journal of the Fire Protection Profession Since 1877

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FIRE ENGINEERING

A Consolidation of FIRE AND WATER ENGINEERING and THE FIRE ENGINEER

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"All is Not Gold"—

RECENTLY a friend of ours, in the market for a car, became impressed with the appearance of a make that wasn't very well known. It was a beautiful thing, seemed to ride nicely, the salesman had a good story,—for a week he was on the verge of buying it.

¶ "No," he finally told us, "I'm afraid I haven't enough confidence in the makers to take a chance. The car never seems to be advertised and I guess it's dangerous to buy an unknown quantity."

¶ Somehow or other we all have a great deal more respect for any advertised product, whether it's an automobile or a shoe-string. We have all learned that we can depend on the manufacturer who is open and above board and isn't afraid to tell his sales story to the world.

¶ If you see it advertised in FIRE ENGINEERING you can be doubly sure it's right.

The Publishers

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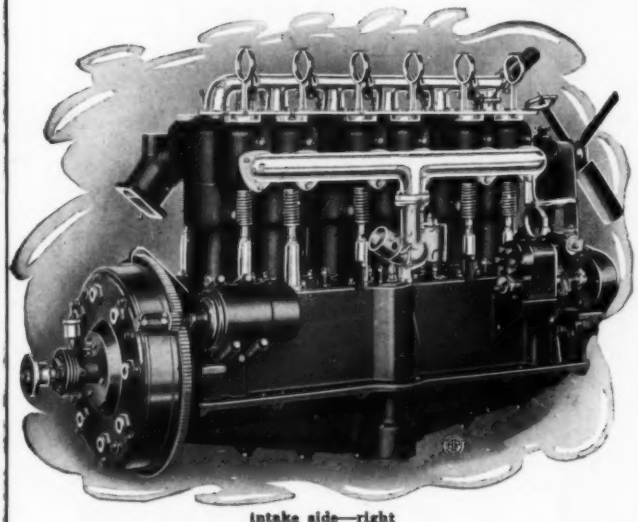
Ahrens-Fox



Intake side—right

Super-Powered Motor

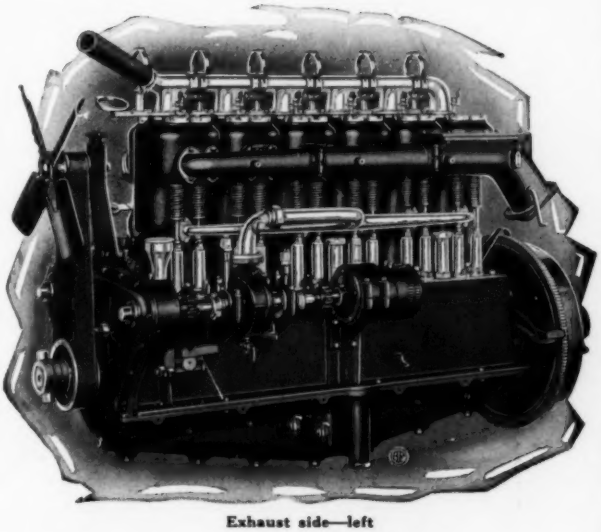
was Designed by Fire Engineers

"IT'S the motor that counts," is a phrase used by nearly all progressive fire officials. They realize that where a long run is called for and where you are forced to deliver hundreds of gallons of water per minute under high pressure—the brunt of the work falls upon the motor. It must not skip or fail—it must deliver.

The close contact of Ahrens-Fox engineers with actual fire service conditions and long experience in designing apparatus to meet these conditions thoroughly qualifies them to furnish municipalities with apparatus equipped with a motor of proven dependability and unquestioned service qualities.

Fire officials who realize the responsibilities of their positions and their duty of protecting the life and property of their town or city as far as humanly possible, know that quality and service are far more important than any other consideration. The cost of your apparatus is measured by service rendered over a long period of years, and not by the initial cost.

Hundreds of municipalities throughout the country who are fortunate in having such officials in charge of their fire departments are now equipped with Ahrens-Fox apparatus. Others are planning to make such purchases in the near future; and if you are interested in up-to-date fire apparatus we shall be glad to send complete information without obligating you in any way.



Exhaust side—left

"Nothing is too good for fire service, and nothing but the best will do."—Ahrens-Fox

The Ahrens-Fox Fire Engine Co.

"Builders of Quality Fire Apparatus"

Cincinnati

Eastern Representative
J. A. PRESCOTT
Fisk Bldg., New York

New England Representatives
CARLOW AUTO CO.
Taunton, Mass.

Chicago Representative
HENRY R. EARLY
Hotel Woodmere,
4641 Woodlawn Ave.

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Inspection
is a one man job with ~ ~

DARLING
FIRE HYDRANTS

The operation is surprisingly simple. Take off cover by removing six bolts. Thrust plate and packing plate are released by unscrewing operating nut on valve rod. A few turns with a seat-wrench permits the removal of all internal parts including main valve seat and drip valve seats.

Any parts showing wear can easily be replaced and the entire hydrant assembled in short order.

Other exclusive Darling features explained in our catalog. Send for it.

DARLING VALVE & MFG. CO.
Williamsport, Pa.

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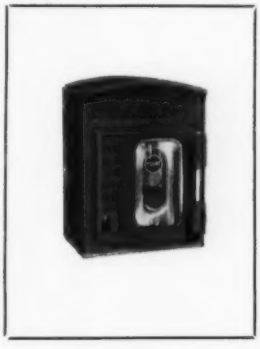
Sterling Fire Alarm Equipment

Helps The Fire Department Save Lives, Time and Money

Sterling Code Fire Alarm Box.

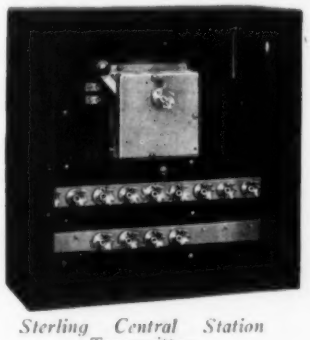
Built to standard municipal type, this Box is provided with a light-weight lifetime-service metal case. The operating mechanism is housed in dust-tight, moisture-proof case. Contains all the typical features such as lightning arrester, terminal and test block, ground connection, line shunt, and telegraph strap key.

WITH the same workmanship and dependability that characterizes all Sterling products, Sterling Auxiliary Controls serve many cities and small communities as faithfully as do their Sterling Sirens. Schools, asylums, hospitals and orphanages having over ten inmates ***should*** have Sterling Fire Alarm Boxes to lose no time in reaching the fire department. Whether the system is Code or Non-Code type, there is an assortment of control equipment to meet all individual requirements. Such apparatus should be recommended by every fire official.



Sterling Control Stations and Street Box

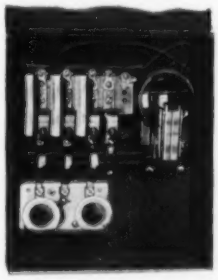
Local conditions in any community can be met by the flexibility of the Sterling Fire Alarm System. Control Stations of the Start-Stop push button type are mounted in the Sterling Street Box to prevent tampering. The Box is of cast iron, with key locked door, break glass front and full directions cast on it. Fully weatherproof. Finish in Fire Alarm Red.



Sterling Central Station Transmitter.

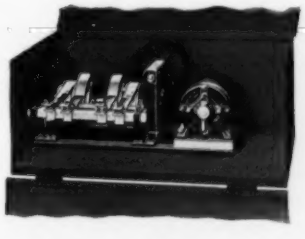
Can be located in Fire or Police Headquarters, Telephone Central or Chief's House, etc. Has portable code wheels for every zone or box number. Any alarm can be coded on Siren from this "Master Box." Special wheels can be provided for Curfew, Drill, Recall, Police Emergency Call, etc.

(Below) This device permits operation of the fire alarm signal from any one or number of points. The Unit provides positive Thermal cut out protection against any possible damage to motor. Equipped with no-voltage release and electrical lock-in.



Sterling Remote Control Unit.

(Below) This device accomplishes the following important services: (1) Automatically produces a succession of Siren blasts, each covering the full sound scale from zero to 800 cycles. (2) With the Pre-Determined Time Stop it automatically cuts out the fire alarm system after the set period of operation. This eliminates the stopping of alarm by hand.



Sterling Automatic Control Unit.

WRITE TODAY for further information regarding installations of new and extended Sterling Siren Fire Alarm Systems.

Engineering Dep't

STERLING SIREN FIRE ALARM CO., Inc.

61 Allen St., Rochester, N. Y.

STERLING

OLDEST AND LARGEST EXCLUSIVE MAKERS OF SIREN SIGNAL EQUIPMENT

This Fine New Engine House at Pleasantville, N. Y., Is Appropriately Roofed With John-Manville Asbestos Shingles.

Every Engine House Should Have a Fireproof Roof

Every engine house should have a fireproof roof—just as every building should. Whether the engine house is a detached pitched-roof building such as that pictured, or is closely shut in on a city street, and has a flat roof, Johns-Manville can furnish a long-lasting, fireproof roof. Engine houses roofed by Johns-Manville will neither take fire from embers nor scatter embers over other buildings.

Johns-Manville Asbestos Shingles, just as they are used on homes, make perfect roofs for the small town engine house. For city stations, Johns-Manville Built-up Asbestos Roofing is ideal. Send us plans for any new engine house, or of an old one with a poor roof. We will be glad to tell you about fireproof roofing suitable for the building. Write to Johns-Manville Corporation, 292 Madison Ave., New York City.

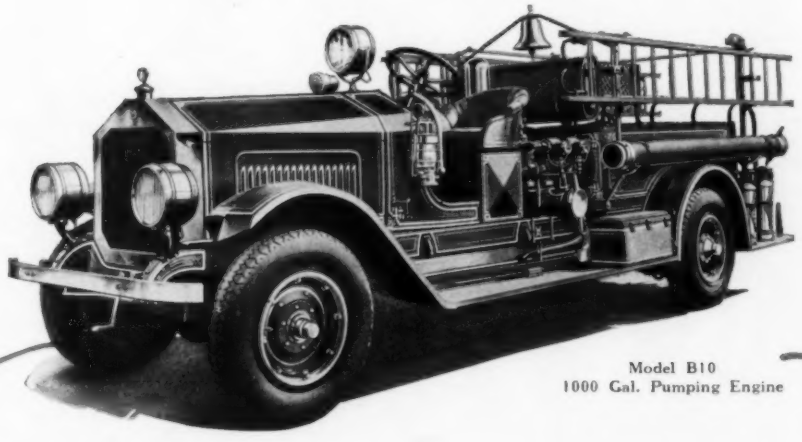
JOHNS-MANVILLE SERVICE COVERS THE CONTINENT

MASTER *of* ASBESTOS

Johns-Manville

ASBESTOS MINERS & MANUFACTURERS

With New England Fire Chiefs ... it's MAXIM



Model B10
1000 Gal. Pumping Engine

The Last Word in Fire Protection

NEW ENGLAND Chiefs prefer **Maxim.** Their orders come in so fast they keep our plant working to the limit and even then we can't always keep up to the demand. Such popularity must be deserved and there's a reason for such justified preference.

All in all we believe that in **Maxim** apparatus you get more for your money in honest to goodness fire protection than anywhere else. The men of this organization have devoted the best years of their lives designing and building the most efficient and sturdy equipment possible of the highest grade materials money can buy.

The remarkably big demand for **Maxim** certainly indicates these men are building the latest word in fire protection equipment. **Maxim** experienced engineers and skilled workmen are putting into every piece of apparatus the sturdiness, high quality and thoroughness that is so symbolic of their section of the country . . . and as a result their product is winning ever-increasing favor throughout New England.

Even though your department is not planning on an early purchase of new apparatus, if you would like to know more about **Maxim** equipment, we will gladly send complete information on request. If you are thinking of buying new apparatus shortly, be sure to get all the facts about **Maxim** before you place the order.

See Our Exhibit at New England Convention

MAXIM MOTOR COMPANY
MAXIM
MAXIM MOTOR COMPANY
Middleboro, Mass.

A TWO-ALARM IN MERRIE ENGLAND

WHO invented the hand pump? History does not say—accurately. We know that before the Pilgrims came to America they were in widespread use in England, and even before that the Romans had employed a somewhat crude form of the same device.

Cyprian Lucar, gentleman, described these surprisingly modern fire fighting machines in a treatise published in 1590. His claims for them, too, sound curiously modern.

"I will set out before your eyes a type of a squirt which hath been devised to cast much water upon a burning house, wishing a little squirt and plenty of water to be always in readinesse where fire may do harme, for this kinde of squirt may be made to holde an hoggeshed of water, or if you will a greater quantity thereof, and may be so placed on his frame, that with ease and a small strength, it shall be mounted, imbased, or turned to any one side right against any fixed marke, and made to squirt out his water with great violence upon the fire that is to be quenched."

The artist has graphically shown how this simple apparatus in the hands of volunteers protected property from destruction.

Office of Town Clerk

Town Hall

Northern Rotary Pump Company
Minneapolis, Minnesota

Rockport, Mass.,

Dear Sirs:

In reply to your letter questioning us regarding the service we have obtained from the Northern Rotary Pump which we purchased from your company in December 1919.

The pump since we purchased it has answered alarms from over fifty fires and never failed to give good service each time it was called into use. Besides answering calls for fires in Rockport, our Northern Rotary Pumper has given assistance at fires in Gloucester, a city some five miles distance from us

The longest pumping service of our Northern American Rotary Pump was at the Cole Storage Fire in Rockport on August 2, 1923, time eight hours; second longest, H. H. Brown Department Store fire, Gloucester, on February 16, 1926, time five hours with the thermometer at 3 above zero, third longest, Steam Boat Wharf fire, Gloucester, on December 16, 1926 with the temperature at zero, time two hours, an urgent call was the Harvard House fire, Gloucester, on October 26th, 1926 with a short and most effective pump.

Our pump is mounted on a Pierce Arrow Chassis. It has seen in active service ever since we bought it with no time out for repairs. As I have already stated it has always been ready when wanted and never failed to respond to any demand made upon it. We are expecting many more years of continued good service out of it.

I am inclosing under separate cover a picture of our pumper. Since the taking of this picture we have had the solid tires replaced with balloon tires thus adding to the efficiency of the apparatus. Otherwise our Northern American Rotary Pump is as pictured.

Very sincerely yours,
Marion Cummings Woodyat
Town Clerk.

From every side come enthusiastic reports from users of Northern-equipped apparatus. In 1919 the town of Rockport bought a Pierce Arrow with a Northern Rotary Pump installed.

Coming after nine years of faithful service, the letter is eloquent proof of the dependability of the truck and its equipment.

NORTHERN ROTARY PUMPS

"MORE GALLONS PER HORSE POWER"

NORTHERN PUMP COMPANY

900 Eighteenth Avenue, N. E. **Minneapolis, Minnesota**

FIRE ENGINEERING

(A Consolidation of FIRE AND WATER ENGINEERING and THE FIRE ENGINEER)

The Journal of the Fire Protection Profession

VOLUME LXXXI JUNE 13. 1928 NUMBER 12

Century Old Department Host to Chiefs

Fire Organization of Convention City of New England Chiefs' Association in Existence Few Months Short of One Hundred Years

By HARRY BELKNAP

THE Burlington, Vt., Fire Department, which is to act as host to the New England Association of Fire Chiefs at its coming convention, falls only a few months short of rounding out a century of existence. The beginnings of the Department—the Burlington Fire company—was organized in December, 1829:

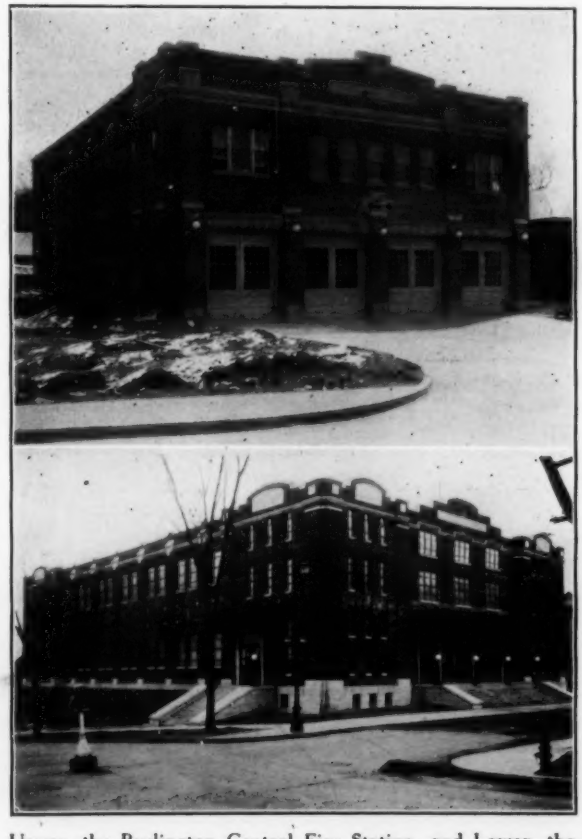
Chief Carl V. Stockwell, Burlington Fire Department

Burlington, Vt., on beautiful Lake Champlain, is to be the scene of the sixth annual convention of the New England Association of Fire Chiefs. It has a population of 26,000 and is the business and recreation centre of Northern New England. It is known as "The Queen City," and is the gateway to the Adirondacks and Canada.

The fire department, under direction of Chief Carl D. Stockwell, consists of 37 permanent men and has three fire houses including the handsome new central station which contains the headquarters offices and the Gamewell fire alarm system. There are two 750-gallon Seagrave motor pumping engines, fitted with booster pumps and 80-gallon tanks; one Seldon combination hose and chemical truck; one Seagrave tractor drawn 85-ft. aerial hook and ladder truck; a chief's car which carries a Draeger pulmotor; a Ford one ton truck; and 360 feet of ladders. The department has 10,000 feet of two and a half inch double jacketed fire hose and 900 feet of three-quarter-inch chemical hose.

In 1895 the department was changed from a volunteer force to a part full paid and a part call force. In 1902 there were 31 alarms and the gross fire loss amounted to $66,294. In 1905 there were 75 alarms and a gross loss of $23,138.

In 1907 the fire force consisted of 19 permanent men and 28 call men. There was a board of three fire commissioners, a chief engineer, first assistant, and second assistant engineer. At this time the equipment, divided among four companies, consisted of one hook and ladder truck, one combination hose and chemical car, and two hose wagons. A Button steam fire engine was kept in reserve. Fire houses were situated on Church Street near Main Street, on North Champlain Street near Worth Street, Mansfield Avenue near Pearl Street, and on South Winooski Avenue near College Street. The Gamewell automatic type fire alarm system was installed in 1907. Several manufacturing establishments in the



Upper, the Burlington Central Fire Station, and Lower, the New Memorial Auditorium, Where the Exhibits Will Be Held

Burlington, Vt., Fire Department in the Days of Horse-Drawn Apparatus. Photograph Taken in 1915

city maintain private fire brigades and are equipped with fire pumps and automatic sprinkler systems.

In 1918 the department had 28 permanent men and 11 call men. A new fire house was built on South Union Street near Howard Street and a combination hose wagon installed. A turret nozzle and deluge set were added to the equipment.

Some Burlington Fire Department History

The history of the Burlington fire department is an interesting and creditable one. It may be said to date from the burning of the old Court House, June 16, 1892. A subscription was then started to purchase some fire apparatus to assist the then "bucket brigade."

The Burlington Fire Company was incorporated October 29, 1829 and organized at Howard's Hotel, December 22, 1829. A small crank engine named the "Boxer" was purchased for $300, and soon after two similar engines, the "Hero" and "Champlain," were bought. All were without suction hose. Companies were organized for the latter engines March 8, 1830. October 22, 1838, an independent company called the "Volunteers," was organized and incorporated November 15, 1839. This company bought a small Hunneman engine, named the "Volunteer" for $275. This company still maintains its independent organization. The captain of both the Engine and Hose Companies is George C. Mayo.

Old Fire Engines Replaced

In 1840 the "Hero" and "Champlain" engines became useless, and a fund of $1,000 was raised to replace the first "Boxer" with a new Hunneman brake-engine of the same name. October 23, 1846, a Hook and Ladder Company, No. 1, was incorporated. In 1854 the Boxer Company No. 3, was reorganized, and on April 28, 1858, its engine was exchanged for a new one. This was remodelled in 1892.

On April 24, 1857, the Ethan Allen Engine Company, No. 4 was organized and incorporated November 5, 1858. This Company purchased a Jeffers engine. The basement of the Court House was assigned to the "Boxers" for their rooms.

Fire Department Established

Under the City Charter of 1865 a Fire Department was established. It consisted of a Chief and four Assistant Engineers, who should have control over the four companies then existing, including the independent Volunteers. After the introduction of the water supply in 1867, hose carts and spiders for the fire hydrants gradually supplanted the use of the engines.

Besides those organized by the original engine companies were the Stars, No. 2, on September 18, 1871, with a station built in 1885 on a lot on North Winooski Avenue, bought October 7, 1884. (The house is now used as an annex by the School Department.) The Howards, No. 5, on October 17, 1871, with a house built on a lot on South Union Street, bought June 21, 1892. The Clippers, No. 6, on November 7, 1871, with a station on Colchester Avenue. The Barnes, No. 7, in April, 1873, with a station built in 1887 on a lot on North Champlain Street, bought August 14, 1875, and enlarged June 4, 1887. Three independent hose companies were the Stars, No. 2, on September 18, 1871, W. N. Greene, the E. M. Sutton, No. 9, and the Garry Owen. The latter disbanded in 1877 and the other two in 1881.

On August 6, 1874, a new fire-alarm bell was placed on the City Hall.

Company Wins U. S. Champion Belt

The Barnes Hose Company, No. 7, won the U. S. Champion Belt, at Chicago, Illinois, on Sept. 4, 1878, including a prize cart and $500. The company comprised eighteen men who ran 300 yards with a cart weighing 500 pounds, having 350 feet of hose on it, to a hydrant to which they attached, reeled off 300 feet, breaking couplings and connecting pipe. Their average

The Present Day Burlington Fire Department with Its Apparatus

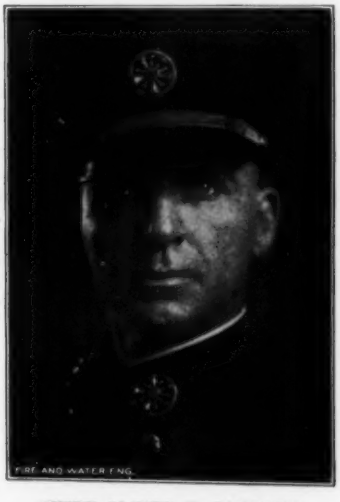
CHIEF FRANK CHARLESWORTH
Second Vice President
Providence, R. I.

CHIEF W. C. SHEPARD
President
Pittsfield, Mass.

CHIEF CHARLES H. FRENCH
Ex-President
Manchester, N. H.

CHIEF J. F. SULLIVAN
Fall River, Mass.

CHIEF JOHN W. O'HEARN
Secretary-Treasurer
Watertown, Mass.



CHIEF OLIVER T. SANBORN
First Vice President
Portland, Maine

GEORGE F. COBB
Traffic Manager
Boston, Mass.

CHIEF SLEDEN R. ALLEN
Brookline, Mass.

CHIEF JOSEPH N. SULLIVAN
Utica, N. Y.

SOME OFFICERS AND SPEAKERS, NEW ENGLAND ASSOCIATION OF FIRE CHIEFS

time of the three trials was sixty-two and one-half seconds. It was a World's Tournament.

Telegraph Fire Alarm System Established

In 1880 the fire-alarm telegraph was established with fifteen boxes. On December 13, 1880, the fire alarm was changed to the bell on the Baptist Church. In 1889

Hotel Vermont, Burlington, Convention Headquarters

a new building was erected for the Ethan Allen Engine Company, No. 4, next north of the old Court House, and a new fire-alarm bell hung in its tower. In 1890 the Clipper Hose Company, No. 6, was disbanded, and the A. C. Spear Company, No. 8, organized. It was located in a new building, No. 58, erected on a lot on Colchester Avenue, purchased December 2, 1889. In 1892 a tower striker was placed in the belfry of the Unitarian Church. November 24, 1892, a Button Steam Fire Engine was bought by the City and located in Station No. 3, on Colchester Avenue. This station was burned January 9, 1896.

On August 19, 1893, the fire-alarm system was completed and the City was divided into three circuits. The alarm which since 1880 has been given by the Baptist Church bell, was transferred to the bell on St. Joseph's Church. In 1894 the alarm battery was moved to the Ethan Allen building on Church Street, a five-circuit repeater was installed and March, 1895, a Babcock double-tank chemical engine was purchased. On July 4, 1895, the Ethan Allen engine was sold to Essex, N. Y., for $340. The year 1895 closed the record of the Volunteer Fire Department, a record full of faithful, efficient service; but the time had come for a paid Fire Department.

Ordinance Creates Paid Fire Department

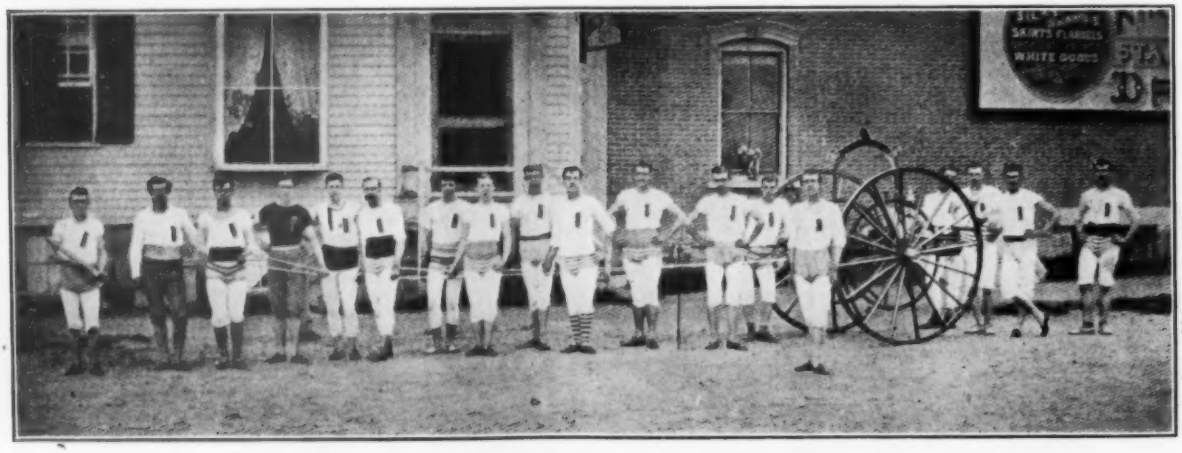
An ordinance was approved March 22, 1895, which established a paid Fire Department. It consisted of a Chief Engineer, two Assistant Engineers, a Superintendent of the Fire Alarm Telegraph and not less than eight full-paid and twenty call men. Four stations were designated: No. 1, the former Ethan Allen building, to which was assigned the chemical engine, drawn by two horses, and two-horse hose wagon; No. 2, the former Barnes Hose building, 120 North Champlain Street, with a two-horse hose wagon; No. 3 the new building on Mansfield Avenue, which was erected on a lot purchased September 18, 1896, and opened January 19, 1897. To this station was assigned the steamer, drawn by two horses, and a two-horse hose wagon. The fourth station was a room in the basement of the City Hall, in which was placed the two-horse hook and ladder truck.

The entire force then consisted of seventeen regular paid firemen, each station having a captain, drivers, and pipemen, and the Engineers required. Also thirty call men, nine horses, one steamer, one chemical engine, one ladder truck, three four-wheel two-horse hose wagons, three hose sleds and one exercise wagon. All but the call men were divided among the stations; the latter were to appear promptly at their assigned posts on the alarm of fire. The annual expense of the department was about $16,000. The average estimated annual loss by fire for nine years after the establishment of the paid Fire Department was $65,000. That of the previous nine years, under the volunteer system, was $87,000.

Carl Stockwell Becomes Assistant Chief

Moses Murray was the first Fire Chief elected to command the paid department and Geo. Hulbert was the

(*Continued on page* 528)



An Old Burlington Hose Company, with Its Hand-Drawn Hose Cart

Should Firemen Inspect Sprinklers?

Here's an Authority Who Says They Should Look Them Over Once a Week—Experience to Be Gained

By O. J. SWANDER, Engineer, Kansas Inspection Bureau

NO chief will doubt the value of the automatic sprinkler system in preventing large fires and thus in the reduction of the fire loss, but this valuable auxiliary in fire-fighting needs constant care and watching. The following article points out the advantages of this work being done by the members of the fire department.

The automatic sprinkler is, by far, the most efficient and reliable fire extinguishing device yet invented. Sprinkler systems are being installed in greater and greater numbers each year, and a thorough understanding of this form of protection is essential for the fire chief or department officer. The officer must not only understand sprinkler systems in general, but he should be familiar with every installation in his city and know where the control values are. When an alarm comes in from a sprinklered building, quick action and sound judgment are required since a moment's delay in shutting off the water may cause thousands of dollars of water damage, while on the other hand, numerous large losses have occurred because the supply was shut off before the fire was completely under control.

Automatic sprinkler systems are usually installed according to specifications formulated by the fire insurance companies which assume the liability on the property. These specifications are so well developed that, when the work is done by experienced workmen and the system is maintained in proper order, the installation will be practically certain to control any fire that may originate. Indeed, the record of fires in sprinklered buildings shows that practically all of the large losses that have occurred were caused by changes made in the system after it was approved by the fire insurance companies.

Should Be Inspected Frequently by Firemen

An automatic sprinkler system should be inspected at least once a week to see that all water supply valves are open, that sprinkler heads are not obstructed by stock piles, and that other undesirable conditions do not exist. While the insurance companies maintain an elaborate inspection service and have trained inspectors who go over the systems occasionally, the cost of such service makes it impossible to make more than three or four inspections a year. With such a long interval between inspections, undesirable conditions are likely to exist for a considerable time, and many of the large losses are directly traceable to this cause. The obvious remedy is for members of the fire department to make frequent inspections of the systems. Such inspections will not only reveal hazardous conditions, but will serve to familiarize the officer with the systems in his city, which knowledge will stand him in good stead at a fire.

Some Matters to Be Noted by Inspectors

Some of the things to look for on these inspections may be seen from a study of the tables on the following pages which are a summary of unsatisfactory sprinkler fires.

Importance of Open Gate Valves

These tables show that the closed gate valve is the most frequent cause of unsatisfactory sprinkler operation, and this feature should be given careful attention. Inspections rfequently reveal valves that have been closed by some employee who forgot to open them again and who neglected to notify the management that they had been closed. One of the safeguards against this trouble is sealing or strapping the valve open, and the department officer should carefully observe that the seal is unbroken. One way to test the supply and see that all valves are open is to open the two-inch drain valve. Each system has a 2-inch drip pipe and gauge located on the riser just above the main gate valve. By opening the valve widely, the drop in pressure may be noted. Under normal conditions, this drop should not exceed 10 per cent of the normal static pressure, and if it exceeds 25 per cent. it is safe to assume that the supply is weak, a valve is closed, or the pipe is obstructed by ice or some other object. A test of the supply should also include an examination of the supply tank to see that they are full and that the contents are not frozen.

All Sections of Building Should Be Sprinklered

A large percentage of the fire loss in sprinklered buildings has been caused by fires which originated in unsprinklered sections of the building. Automatic sprinklers are designed to control incipient fires, and depend for their successful operation upon a small quantity of water applied at the start of a fire. They cannot be expected to control fires which have gained great headway before the heads have had a chance to operate. Under such conditions, so many heads usually open that the water supply is overtaxed, and in many cases, this results in the total destruction of the property. One example is that of a large, joisted, brick cotton mill entirely sprinklered except for the engine room. Fire started in the engine room and gained such great headway that when it reached the sprinklered mill it was beyond control, and the total destruction of the mill with a loss of $930,-

"WHILE these inspections will aid in preventing and correcting undesirable conditions, a large share of their value will be in the resulting speeding up of operations at a fire, because the officer is familiar with the system and knows where all the valves are."

Summary of Unsatisfactory Sprinkler Fires

	1927–28		1897–1928, inclusive	
	Number of fires	Per cent	Number of fires	Per cent
Water shut off sprinklers	26	28.9	511	31.1
Generally defective equipment	9	10.0	....	.....
Unsprinklered portions	5	5.6	317	19.2
Defective water supply or supplies	9	10.0	147	8.9
Sprinkler system crippled due to freezing	....	....	43	2.6
Slow operation of dry system or defective valve	2	2.2	42	2.6
Faulty building construction, concealed spaces, vertical openings, etc.	6	6.7	84	5.1
Slow or defective operation of high test head	....	....	25	1.5
Obstruction to distribution	3	3.3	92	5.6
Hazard of occupancy too severe for average sprinkler equipment	9	10.0	98	5.9
Explosion crippled sprinkler system	1	1.1	15	.9
Plugged heads (included with miscellaneous prior to 1921)	1	1.1	15	.9
Miscellaneous	9	10.0	123	7.5
	80	....	1,648	.....

Fire in which Failure was Due to Water Shut Off Sprinklers

	1927–28	1897–1928
	Number of fires	Number of fires
Water shut off for unknown reason, neglect or carelessness	4	172
Water shut off before fire was out, or fire rekindled	5	82
Water shut off due to accident or repairs	7	86
Water shut off to prevent freezing	7	115
Water shut off, probably incendiary	.....	8
Water shut off, leaky dry system	.....	11
Water shut off, defective gate valve	.....	8
Water shut off, miscellaneous	3	29
Total	26	511

000 resulted. For this reason, the officer should insist that all new sections of a building be equipped with sprinklers before they are occupied.

Watch for Obstructions Too Near Heads

The officer should also watch for obstructions which may interfere with the distribution of water from sprinkler heads. Probably the most frequent condition of this kind found is stock piled too near the heads. At least two feet clear space should be maintained below the ceiling and all stock piles or racks. Neither should stock, clothing, etc., be hung on sprinkler piping. Sprinkler distribution is often interfered with by partitions, stair inclosures, etc., placed after the system was installed. Any partitions necessary after a system has been installed should be placed mid-way between two rows of sprinkler heads in order that the distance from the partition to the first row of sprinklers shall not exceed half of the permissible distance between heads. If the partition cannot be placed mid-way, additional heads are required. In a few cases, it may be possible to cut down a partition several feet and thus insure satisfactory distribution.

New shelves, platforms, galleries, desks, wide tables, and other large fixtures require sprinkler heads below them. Sprinklers are also required in show windows, show cases, telephone booths, air ducts, ventilation shafts, and in other objects large enough to interfere with sprinkler distribution.

The officer should also observe that all sprinkler heads are clean. Heads in flour mills and other dusty places are likely to become coated with dust, and heads are often carelessly painted when a room is being redecorated. Any dirty heads should be cleaned or replaced.

Valuable Experience to Be Gained Through Inspections

In addition to the things enumerated, the department officer will find, when he gets into the work, that there are numerous other details to look for. Considerable valuable experience can be gained if he will accompany the insurance engineers and sprinkler company engineers on their inspections.

While these inspections will aid in preventing and in correcting undesirable conditions, a large share of their value will be in the resulting speeding up of operations at a fire because the officer is familiar with the system and knows where all of the valves are. If a fire occurs during business hours, usually little difficulty will be experienced in locating the cause of a alarm as the information can, in most cases, be secured from persons on

(Continued on page 527)

A Burning Oil Well Is a Serious Matter

Oil is the same hazardous commodity the world over. Rumania recently suffered great losses when oil wells were burned at Moreni. The photographs shows the tall column of flames that shot out from one well where fire had occurred.

Intense Heat Needs Heavy Streams

Small Streams Have Neither Range Nor Required Cooling Effect—Suggested Method of Handling the Fire Described in Last Issue

IN the last article of the series on administration, a fire in a particularly hazardous block of buildings was described. A six story department store, a three story brick and joist constructed theatre building, a dry goods store, a two story furniture store, and a garage were all grouped in one corner of a block.

The fire started in the theatre building and entered the department store through unprotected doorway in basement, with a result that the department had a bigger fire on its hands than it was able to handle.

The city in which this fire occurred had a population of approximately 68,000. The water supply was excellent in the neighborhood of the fire, there being 12 and 10 inch mains on surrounding streets. The water pressure was supplied by a gravity system and the pressure ranged from 45 to 50 pounds.

The Fire Department

The fire department consists of five engine companies, two truck companies and one chemical company.

Engine Cos. Nos. 1 and 3 have 750 gallon pumpers, triple combination; Engine Co. No. 2 has a 700 gallon triple combination; Engine Cos. 4 and 5 each have a 500 gallon triple combination pumper.

Truck Co. No. 1 was equipped with a city service truck and Truck Co. No. 2 with an aerial truck.

Chemical No. 1 has a combination chemical and hose wagon equipped with a deluge gun.

Response to alarms as follows: First alarm, Engine Cos. Nos. 1 and 2 and Truck Co. No. 2.

A general alarm brings out Engine Cos. Nos. 3 and 4 and Truck No. 1.

Engine Co. No. 5 and Chemical Co. No. 1 respond only on special call.

Description of Property

The diagram herewith shows the layout of the fire building as well as surrounding structures.

The fire started in the theatre building as shown in the sketch. To the west of this building was a six story department store of brick and joist construction, well filled with highly inflammable merchandise.

To the east of the fire building was a one story dry goods shop, beyond which were a one story lunch room, a two story shoe store, and a five story brick hotel.

South of the fire building was a two story furniture warehouse fully stocked while beyond this was a two story building occupied on the ground floor by a restaurant and on the second floor by a pool room.

Southeast of the theatre was a large one story garage of usual construction.

Buildings across the street both to the north and west are shown in the sketch.

The theatre building was a converted building, having formerly been part of a large structure located on the corner of Wilbur Avenue and Lorraine Street. A brick wall divided the theatre from the department store, but there were two doorways in the basement connecting the theatre building with the department store. Both were heated by a common heating plant.

The fire was discovered at 12:30 a. m. and apparently started in the theatre dressing rooms beneath the stage shortly after the evening's performance. At the time of discovery the fire had gone up through the stage well and was apparently out in the auditorium, judging from its condition when the department responded.

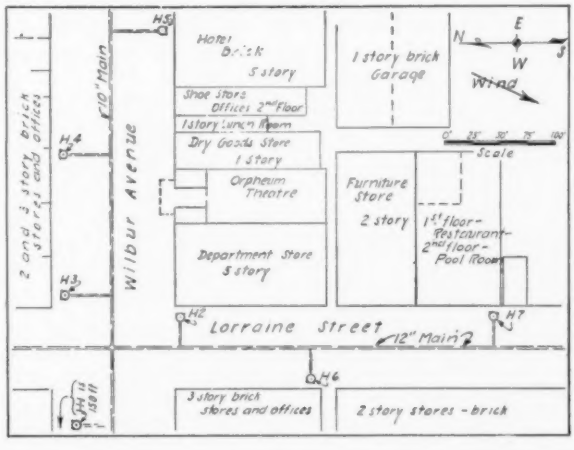
Alarm Sent in at Once

The patrolman transmitted a box alarm immediately upon discovering the fire, bringing out the first alarm assignment.

The fire alarm office records show the receipt of the box alarm at 12:31; first alarm apparatus arrived at 12:34, and the assistant chief at 12:36.

The assistant chief reported that upon his arrival fire was going through the roof above the stage well and the wind was driving the smoke against the department store.

He immediately investigated the interior of the theatre building and found the auditorium well charged with smoke and fire burning up beneath the ceiling, it apparently having come through the proscenium arch from the stage well.



The assistant chief immediately upon noting the condition transmitted a general alarm, which was sent in at 12:39. The first of the apparatus on this alarm arrived at 12:43, and the chief reached the fire at 12:46.

Suggested Method of Handling Fire

As noted in the heading of the last installment of this series of articles, deck guns would have helped—had the fire been permitted to go through the theatre roof in sufficient volume to seriously expose the department store and furniture store to the rear.

In this case a deck gun placed on Wilbur Avenue would have proved mighty effective for covering the department store while a heavy stream placed to the east of the threatre building would have proved effective for covering the furniture store across the alley from the rear of the theatre.

But the method of handling the fire as suggested here does not put into use a deck gun, for it will be assumed that the roof of the furniture store to the rear of the theatre is still tenable at the time of the arrival of apparatus.

Immediately upon noting the extent of the fire, and the probability of needing all the apparatus available, special call should be sent in for Chemical Co. No. 1, in order that the hose on that apparatus will be at hand and ready for use; Engine Co. No. 5 will also be needed and will be assigned as will be noted in further paragraphs.

Hence both of these companies should be called immediately upon making a survey of the fire and noting its extent.

Place Engine Co. No. 1 at hydrant No. 3 and stretch two lines—one to the front entrance of the theatre, using a 1¼-inch nozzle. This line will prove effective in killing the heat in the auditorium and will also be of some use in holding fire from coming through the proscenium arch.

The second line from this company to be stretched to the rear stage entrance of the theatre, and operate into stage well to kill heat. This second line should be equipped with a 1⅛-inch nozzle.

Place Engine Co. No. 2 at hydrant No. 5 and stretch two lines to the furniture store, siamesing them into a single length of 2½-inch hose to which is attached a 1½-inch nozzle with holder. This nozzle to be operated from the roof of the furniture store and to cover the department store as well as kill whatever fire possible in the stage well. This line will prove mighty effective in preventing fire from entering the department store and will also be of value in killing the heat and thus delaying or preventing possible entry of fire into the furniture store.

Truck Co. No. 2 to be divided, two men going to the roof of the Orpheum Theatre at once to open up. Two other men to make a survey of adjoining buildings. These men will discover the condition in the basement of the department store and the assignment of lines from the third engine company will be as follows: Place this engine at hydrant No. 4 and stretch two lines, one to the basement of the department store, using a 1⅛-inch nozzle; the second line to go to the balcony of the theatre, using 1¼-inch nozzle.

Place Engine Co. No. 4 at hydrant No. 2 and stretch a single line to the roof of the Orpheum Theatre near the Wilbur Avenue side of the building and cut hole through roof and put cellar pipe into play. This will be necessary to kill whatever fire has entered the space above the false ceiling of the theatre.

Place Engine Co. No. 5 at hydrant No. 6 and stretch a line either to the basement of the department store or to the rear entrance of the theatre. If an additional line is not needed in the department store basement, then it should operate from the rear of the theatre. Later, after the main body of the fire has been killed in the auditorium of the theatre building, both this line and one of the other lines operating from the Wilbur Avenue side proceed to the basement.

This procedure will be determined, however, by the condition of the fire.

Members of Truck No. 1 to be assigned to patrolling exposed buildings to detect or prevent entry of fire.

It is believed that the above assignment will be able to hold the fire to the theatre building. At least, there is little chance of the fire getting beyond the theatre building with the above layout. All apparatus is being used to its maximum capacity, and a sufficient number of fair sized streams will be available for confining the fire to this one building, in the event that the building becomes fully involved.

Tarentum, Pa., to Buy Apparatus—Tarentum, Pa., is planning to purchase new fire apparatus.

Sioux City Firemen Fight for Raise

Sioux City, Ia., firemen are making the third fight within two years for a pay increase. An increase has been submitted for council consideration, granting the firemen a fifteen dollar a month increase.

The commissioner of finance said that the present surplus would only permit this increase to be paid for one year.

The new ordinance provides for a $300 a year increase for the fire chief. It brings his salary up to $3,000. Each assistant chief would receive $2,580 and the captains would be raised from $1,860 to $2,100; lieutenants from $1,740 to $1,920 after two years of service. Regular firemen would be raised from $145 to $160 a month.

Firemen have made a strenuous fight for a salary increase since 1926, when the voters authorized an increase of $30 a month in salary. The city council, however, refused to pay the increase, and the firemen took the case to the district court, winning the decision. The city appealed to the state supreme court, which reversed the decision of the lower court, holding that the city council was not obliged to grant the increase.

Twice during the regime of the last city council the question of an increase for firemen was up before the council, but that body refused to grant the increase on the contention that there were no funds with which to pay the increase.

Two Firemen Killed at Department Drills

Two firemen in Portland, Ore., were killed while practicing drills that were to form part of the Rose Festival, an annual city event.

Two seventy-five foot ladders had been set up in the middle of the street to form an inverted V. A rope was dropped from the apex and one fireman was to slide down the rope, take another fireman from the ladder and descend to the ground. The fireman who slid down the rope had a life belt which acted as a brake during the slide. Everything went well. He had taken the fireman from the ladder and the two swung in the air ready for the slide to the ground. Then the life belt broke.

Both were experienced firemen and had performed the same feat several times last year during the Rose Festival. The men had practiced the same stunt three times this year.

Chief Grenfell said that the accident was unavoidable. The belts are frequently tested, and one was tested to hold the weight of six men. The belt that broke appeared to be much stronger and in better condition than some others that are in service.

Keystone Farmers Form Fire Department—Keystone, Ia., has a rural fire department consisting of 190 members and has purchased a chemical car for farm protection. The membership fee is twenty dollars and entitles the member to the free use of the apparatus. A fee of fifty dollars will be charged non-members.

Golf Is the Latest Fad for Pasadena Firemen

If the present sport continues to gain followers in the Pasadena, Cal., fire department, it may be necessary to install some kind of fire alarm signal on the links as a precautionary measure. Golf has been accepted as the sport by many members of the department. Chief E. V. Coop of Pasadena is shown making the drive that won the fire-fighters the match between the police and fire departments.

WITH THE EDITOR

A Striking Comparison in Fire Panics

Two very significant occurrences, emphasizing as they did the contrast between disciplined and undisciplined crowds in time of fire panic, occurred recently. In one instance, some 300 people seated in the balcony of a moving picture house in the Bronx Borough of New York City, were thrown into a wild panic when one of the reels of a picture being shown caught fire. The smoke from the projecting booth belched into the auditorium and the usual excited individual raised the cry of "Fire!" Instantly pandemonium reigned and the people in the balcony rushed pell mell for the two stairway exits leading to the main entrance.

Naturally, a jam occurred at this point and it was only by a miracle that a huge loss of life did not result. As it was, before the police could calm the excited patrons and relieve the tangle of persons at the exits, three young women were badly crushed and trampled, one so severely that she had to be taken to a hospital.

In contrast to this occurrence, in which unrestrained fear seemed to have taken hold of the crowd in the theatre, was a recent happening in a Philadelphia church. During a service at which some five hundred adult members of the congregation were present, a candle was tipped over, igniting the linen covering of the high altar. A procession of children was advancing up the aisle, and as the blaze leaped up, the leader of the children, with admirable presence of mind, at once started them singing a hymn.

This apparently had a calming effect upon the congregation, which had begun to show signs of fear. The members remained in their seats, while some of the men, led by a fireman off duty, sprang to the front and beat out the fire.

These two events, small in themselves, show very clearly the influence that cool-headed individuals can have over a crowd, when moments of danger arise. The first instance—that in the moving picture theatre—again emphasizes the great peril of panic. It is a well known fact that such panics among large assemblages of persons are contagious—that the atmosphere of tense excitement prevailing at the moment will communicate from one individual to another in a large gathering, causing such persons to perform acts that in their saner moments they would never think of doing. Probably, if left to their own devices, and without anyone to lead them toward sanity and self control, the people in the Philadelphia church would have acted much as did the patrons of the movie house in the Bronx.

Much, however, depends upon the education of the individual in self-control and calmness in time of emergency. The average modern theatre audience, when properly directed and held in restraint, will move quietly out when the alarm of fire is given. This will probably be more pronounced as time goes on and as the present generation of school children, grown to manhood and womanhood, remember their early training in school fire drills. Such steadiness and calmness, instilled in their minds as children, will serve them in good stead when they have attained their majority.

Fighting for a Salary Raise

Out in Sioux City, Ia., the members of the Fire Department, from the Chief down, are fighting for an increase in salary. This fight has now been going on for two years. Three times within that period ordinances have been introduced into the city council, authorizing a boost in the pay of the firemen, and twice the measure has met with defeat. The present ordinance is the third attempt to effect a raise in the salary of the chief and his men, but the city council, it is asserted, is opposed to the raise, on the ground of lack of funds.

In 1926 the voters of the city authorized a raise in the firemen's salaries, but the city council refused to pay it. The matter was threshed out in the courts, the District Court deciding in favor of the firemen, but the Supreme Court of the State holding that the council was not obliged to pay the advance. Twice since that time the council has refused to grant the raise.

This reason for not giving the members of the department their due is by no means unique in the procedures of city councils. In fact, such bodies are proverbially slow in recognizing that their chief and his men are very often paid less salary than many of the unskilled laborers and mechanics in business establishments and commercial enterprizes.

This is especially true of the head of the fire department. There are many cities who pay their fire chiefs so poor salaries that it is only a wonder that they are able to retain the services of men so able and efficient as those that fill such responsible posts.

No doubt the enthusiasm in their work and a love for the service influences such men to retain their positions, in spite of the poor pay involved. But this fact, while it redounds to the credit of the chief, puts the city itself in a very unfavorable light. It is a poor argument to claim that the funds will not allow of an increase for the firemen. If this is the case, then the finances of the city should be so rearranged as to allow of the payment to its firemen of at least a living wage, and one commensurate with the knowledge and skill needed to fight fire and prevent it.

The responsibility for not only many millions of dol-

lars worth of property but also for the lives of the citizens is placed upon the shoulders of the chief, and it is neither fair nor wise for the city to ask him to assume this responsibility, without adequate pay therefor. No private business would think of doing this, and for the city to rely upon the loyalty and public spiritedness of its chief, in order to "get away" with the payment of a small salary, does not place it very high in the respect of the ordinary citizen.

The average modern fire chief must be a man of considerable variety of knowledge, and, as such, he should receive the salary of an expert in his line of work. Many of them do not!

The Boy Scout in Fire Protection

Chiefs of Fire Departments are beginning to look more and more to the possibilities of interesting the youth of the country in matters of fire-fighting and fire prevention. They have begun to recognize the great value that the interest of these youngsters possesses for the future of the fire service.

One of the focal points of attack in this respect has naturally become that most unique and influential body of youths—the Boy Scouts. The work of stimulating interest in firemanic matters among these youngsters has been greatly forwarded by the excellent cooperation which all chiefs who have begun work among the Boy Scouts have received from the officers and Scout Masters of the organization.

In several cities Scouts have been formed into junior fire departments, in some cases the organization becoming a regular unit of the department. These youthful fire-fighters are expected to aid in all matters of fire prevention and also the promotion of public safety. These Scout members appear at public functions and ceremonies in uniform, and often are able to perform duties which heretofore it was necessary to detail regular members of the city fire force to attend to.

They also are valuable in assisting in fire inspections and in reporting all violations of fire and safety ordinances. In some cases they are given authority to regulate crowds at fires, and have done excellent service in this respect. In fact there are numerous instances where the utilization of these youths has proved of immense benefit to the fire department and the community.

N. Y. City to Hold Deputy Chief Exams.

The New York Fire Department is receiving applications from applicants who want to try the promotional examinations to rank of deputy chief and battalion chief.

In making the ratings, mental examinations will count fifty points, and the record and seniority will count fifty. On the examination, questions on administration will count six, report two, laws and ordinances one, and rules and regulations one.

Credit is given for service in the United States Army, Navy or Marine Corps and for fire department awards and citations. Credit is also given for army, or navy decorations.

A large number are expected to compete for the examinations.

PELHAM MANOR FIRE DEPARTMENT REORGANIZED BY PAID CHIEF

Retired New York Battalion Chief Takes Hold—Opposition Overcome by Vote—Former Firemen Refuse to Serve Under New Chief

By WILLIAM JEROME DALY

"SHALL the Fire Department run the Village or shall the Village run the Fire Department?"

Thus did the trustees of the village of Pelham Manor, N. Y., on the border of New York City, between the Borough of the Bronx and the city of New Rochelle, place before the voters of that community on May 28, the question for a referendum vote which was answered by 258 against 203 in favor of the Village Trustees running the Fire Department — consequently the incorporated Volunteer Fire Department was legislated out of office and the volunteers went on strike, all because the Village Trustees, recognizing the need for improving the fire department, decided to engage a paid fire chief.

Chief John J. Brennan
Pelham Manor, N. Y.

The vote was the largest expression of the voice of the people of that community ever cast in the entire history of the village. The volunteers (not all, but enough of them) rebelled against the principle of selecting a trained fire fighter to lead them. The man whom the Village Trustees appointed Fire Chief, is John J. Brennan, former Battalion Chief in the New York Fire Department, retired on a pension two years ago, after 22 years of active service, to engage in business for himself. He is 46 years of age.

Chief Brennan Takes Hold

Chief Brennan is regarded as one of New York's most progressive fire fighters—a man of executive ability and capacity, possessed of initiative and decision. He is now resorting to those attributes in reorganizing the personnel of the Pelham Manor Volunteer Fire Department. He has five paid-part-time firemen with him now to handle two pieces of apparatus, but he has not up to this writing had a fire to cope with and therefore does not know just how many of the former volunteers still have enough civic pride and interest in their community to respond when the village whistle blows for the next fire.

The situation is no doubt similar to that confronting many growing communities in this country today, especially those suburban communities on the edge of large cities and which have been built up mainly by the home owner seeking a country fireside within commuting distance from his place of business. Therefor a brief review of the Pelham Manor affair should be interesting to the fire fighting profession in general.

Pelham Manor a Progressive Community

Pelham Manor is one and three-tenths miles in area, with a population of 5,000 persons which is an increase of 100 per cent in the past two years; it has an assessed valuation of $22,000,000, its annual assessments amounting to sixty per cent of the property values, and it is one of the most exclusive colonies of suburban New York. Most of its residents are New York business men, leaders in finance, commerce, law and other industries and professions.

It has 900 dwelling houses. The homes of its residents are considered among the show places of the metropolis, furnished and decorated in the finest and rarest of style, some of them containing furniture and ornamentations invaluable and irreplacable. Its houses and mansions are set far apart, which accounts for such a small community, having twenty-five miles of roadways.

The Volunteer Department

Its former volunteer fire department was commanded by a tradesman, a sort of neighborhood contractor on a small scale,

(*Continued on page* 512)

Questions and Answers

NOTE—Readers are invited to send in questions, which will be answered in the order received. Names are omitted from questions unless otherwise specified.

Insurance on Fire Apparatus

To the Editor:

I would appreciate any information you may be able to furnish on the following:

Do incorporated or municipal fire companies or departments outside of cities carry insurance on their apparatus against accidents to apparatus and against damage by fire or otherwise?

Do you know what form of insurance is carried and about the rates that may be obtained? K. R.

Answer: Through the courtesy of The Travelers Insurance Company of Hartford, Conn., we present the following information on the above subject.

"The Travelers writes in certain places Automobile Liability and Property Damage insurance for the operation of fire apparatus.

"This company also writes in certain places damage to fire apparatus caused by fire excluding certain movable parts which must necessarily go into burning buildings or be very close to them, such as fire hose and the like.

"The Automobile Liability and Property Damage rate for fire trucks is substantially higher than is the rate for private passenger cars or commercial cars.

"It is very difficult to make a comparison of the fire rates for fire trucks to similar rates for commercial trucks, for the reason that fire apparatus fire rates are based on certain percentage of the Contents Fire rate. This is not necessarily true of commercial cars.

Procedure at Tenement Fire

To the Editor:

Will you kindly answer the following question in an early issue?

You are in charge of a fire for ten minutes which is burning in the front hall and stairway of a four-story tenement building. Equipment consists of two engine companies and two truck companies. Explain in detail your procedure. H. C. T.

Answer: Your first action will be governed by the extent of the fire upon your arrival. If the fire has gained control of the stairway and cut off the escape of persons on the floors above, additional help should be called without delay. This additional help will be necessary to effect rescues which will likely have to be carried out at both the front and rear of the building; and at the same time tackle the main body of the fire.

Doors off hall and stairways of tenement buildings are apt to be closed, which is a point of advantage to the occupants of the building. The possibility of persons being smothered by smoke or burned is lessened due to this fact and their safe rescue is almost assured if they remain cool and do not jump from the windows from fright.

First truck company on hand should raise ladders to the fire escape at front of building, thus effecting the rescue of persons thereon. Life nets should be kept in readiness in case any of the tenants should become paniky and attempt to jump from their position on fire escapes or windows. Second due truck company should get ladders to rear of building, raising same to whatever floors the occasion warrants.

Two men from either of these truck companies should be sent to the roof to open up over stairwell and thus draw the heat and smoke out, preventing mushrooming of fire and smoke on the upper floors.

First engine company stretch two lines to front entrance of building, one line to kill fire in hallway and the second to go up stairway. Second engine company stretch one line with sufficient hose in line to follow up stairways to whatever floors the fire may have spread.

The first line in operation should endeavor to kill fire up stairway so that second line can get up stairway to combat any fire that may have gone above. The quicker lines are gotten in operation on the fire in the stairwell, the greater will be the safety of the stairway for operating as well as the escape of persons on the various floors.

The chief point to bear in mind is that no time should be lost before calling additional help, should the fire show signs of gaining headway.

Work Done by Boy Scouts

To the Editor:

Could you give me the names and addresses of some towns and cities having Boy Scouts aiding them in fire prevention work, such as appeared in FIRE ENGINEERING on July 13, 1927, as I wish to get some information that would help me in the same class of work in this city. H. W.

Answer: The following data, furnished by the "Boy Scouts of America," is quoted from literature dealing with the above subject.

A Boy Scout fire patrol has been undertaken by the Yakima, Wash., fire marshal, with the approval of the Mayor, Fire Chief. The new organization is a regular unit of the fire department and is expected to aid considerably in fire prevention work and the promotion of public safety.

Only outstanding Scouts are chosen for the patrol. The Scouts attend the regular schools held by the firemen. In turn, the fire chief attends the Scoutmasters' classes. He has an Eagle Scout as his assistant and in direct charge of the patrol.

The Scouts appear in uniform at large public assemblies, taking the place of firemen previously assigned to the task, and help in the regulation of the crowds and the averting of possible panics in case of fire. The patrol members have also authority to regulate crowds at fires, and to assist in such work as keeping traffic and crowds away from the hose lines.

In addition, each Patrol Scout is assigned to a section in the residence district, in which he will watch for fire hazards, and has authority to report hazardous conditions and to make suggestions to the residents.

This carefully worked out plan shows the type of efficient service rendered by Scout Troops in fire prevention and in assisting firemen.

Firemenship Service of another type is rendered in connection with hikes and camps in preventing and fighting forest fires. Here is civic service of a high order.

Co-operating with the State Forestry Service and the Washington Forest Fire Association, Boy Scout leaders of Washington appointed older Scouts to serve as special scout fire wardens during the dangerous months.

The move was a continuation of the project started last year, when forest fire protection agencies of Washington asked Scouts to aid in the education campaign being waged for tourists and campers.

Approximately 200 Boy Scouts in the forest fire areas of the State were commissioned.

The fact that the Firemanship Merit Badge is among the number for which Second Class Scouts may qualify is in part responsible for the great increase in the number of badges being awarded. 25,166 Scouts earned this Badge in 1927, and are qualified to be of real assistance in the fire-prevention work in their communities.

Springfield, Mass., Troop 2, Assisted in Traffic control at Jamieson Refinery fire.

Afton, N. Y., Troop 1, Cleaning hydrants and fire station of snow.

Pentwater, Mich., Troop 2, Acted as Forest Fire Prevention Squad.

Relay, Md., Troop 1, Helped firemen put out forest and house fires.

New London, Conn., Troop 3, Acted as guides at State Convention of Firemen.

Council Grove, Kans., Troop 2, Assisted State Fire Marshal on inspection.

Los Angeles, Calif., Troop 71, One boy assisted firemen fight grass fire. Taking special instructions in firemanship by practical fire fighting from Captain of Engine Company.

Anaheim, Calif., Troop 71, Traffic duty during oil fire caused by lightning.

Pekin, Ill., Troop 8, Helped during fire prevention week.

Honolulu, Hawaii, Troop 22, Boys saved belongings in burning home.

Worcester, Mass., Troop 98, Dug out hydrants during blizzard, watching fire alarm boxes Hallow-e'en and July 3rd, formed fire lines with staves during fire.

Keyport, N. J., Troop 37, Kept the crowd back at local fires by forming a human chain.

Nozzle Pressure on Branched Lines

To the Editor:

Will you kindly let me know if it is possible to lay out 1,000 feet of 2½-inch hose and then to branch it into two 2½-inch lines, and to obtain serviceable fire streams by so doing. What size of tips should be employed on the two nozzles.

For purpose of illustration, assume a hydrant pressure of 40 pounds which is increased by the pumper to 160 pounds. I believe that by using a ⅝- or ¾-inch tips satisfactory streams could be obtained.

Your early reply will be appreciated. F. D. A.

Answer: Here is the solution to the problem you submit: 1,000 feet of 2½-inch hose divided with a Y-connection into two lengths of 2½-inch hose each equipped with a nozzle.

First considering each nozzle equipped with a ⅝-inch tip the calculations are:

Reduce the two parallel lines of 2½-inch hose 50 feet long to a single line. 50 ÷ 3.6 gives us approximately 14 feet. Then the total length of a single line of 2½-inch hose is 1,000 plus 14 or 1014 feet.

Underwriters' formula for determining nozzle pressure is:

Nozzle pressure = Engine pressure divided by (1.1 plus K x L).

In the above L is the number of 50 foot lengths of hose in the line and is 20.3.

Before we can find "K" we must find the equivalent of the two nozzles (⅝-inch)—as a single nozzle. Two ⅝-inch nozzles are equivalent to a ⅞-inch nozzle.

The value of K for a ⅞-inch nozzle on 2½-inch line of hose is 0.0586.

Then nozzle pressure = 160 ÷ (1.1 plus .0586 x 20.3)
= 160 ÷ by 2.29 = 70 pounds approximately. This is the pressure on each of the ⅝-inch nozzles.

If ¾-inch nozzles were used the calculations would be as follows:

L, would be 20.3.

"K" for a 1-1/16-inch nozzle (the equivalent of two ¾-inch nozzles) = 0.1275.

Then nozzle pressure = 160 ÷ (1.1 plus .1275 x 20.3)
= 160 ÷ 3.68825 = 43 pounds approximately. This pressure is the pressure at each of the ¾-inch nozzles.

Thus from the above calculations it would appear that the layout as given would give satisfactory pressures on either the ⅝ or ¾-inch nozzles used on 50 foot branch lines fed by 1,000 feet of 2½-inch hose and with engine pressure at 160 pounds.

Granite City, Ill., Firemen Get Increase—Firemen in Granite City, Ill., are scheduled for pay increase.

What Cheer, Ia., Firemen Form Organization—Farmers in the vicinity of What Cheer, Ia., have contributed towards the upkeep of fire apparatus for farm protection. The area includes the villages of Thornburg and Gibson. Each member must pay five dollars a year and must attend at fires. Non-members may have the use of fire apparatus but they will be charged for each run made. This move is a cooperative one between farmers and town folk.

Chief Dougherty Guest of Box 52 Association

Assistant Chief Thomas F. Dougherty, executive head of the New York Fire Department College was the guest of Box 52 Association, Boston on May 16.

Chief Dougherty arrived in Boston on Tuesday afternoon. He inspected the new fire department headquarters on Broadway and the fire alarm headquarters in the Fenway. At the latter office, a demonstration was given of the two way radio communication with fire boats of the department.

Asst. Chief
Thomas F. Dougherty

Wednesday morning, the chief was taken on a sightseeing tour. He was accompanied by President Parker and Assistant Chief Fox who was detailed by Chief Sennott to look after the visitor. At 12:30 o'clock the officers of the association entertained Chiefs Dougherty and Fox at a luncheon in the Parker House. In the afternoon, brief calls were made on Chief O'Hearn of Watertown and Chief Allen of Brookline.

At 6:30 p. m. 101 members and guests sat down to a dinner served in the state suite of the Copley-Plaza Hotel. President Parker presided and introduced Commissioner Hultman who, in the absence of the mayor, extended the welcome of the city. Chief Sennott extended the greetings of the department.

Seated at the head table were President P. Hildreth Parker, Vice-President Bartlet Tyler, Assistant Chief Thomas F. Dougherty of New York City, Commissioner Hultman, Chief Sennott, Assistant Chief Fox, Deputy Chief Caulfield, Superintendent Thompson of the Boston Protective Department, Chief George L. Johnson of Waltham, Chief Frank Charlesworth of Providence, R. I., Deputy Superintendent Goode of Boston Police Department, Chief Hill of Belmont, Howard A. Nash, vice-president of Box 4 Associates, Worcester and Charles W. Mowry, assistant manager of Factory Mutual Laboratories, Boston.

At the close of the dinner, the President, in behalf of the Box 52 Association, presented Chief Dougherty with a silver cigar box suitably inscribed and bearing the insignia of the association.

Invitations had been extended to fire department officials of nearby cities and towns, to meet Chief Dougherty at 8 p. m. Representatives were present from more than twenty-five departments in Massachusetts and Rhode Island.

Chief Sennott was introduced by Mr. Parker who in turn introduced Chief Dougherty. The chief's address was well received and has been termed the best that the association had heard. The talk brought forth considerable questions and discussion of value.

The death of Chief William F. Daley of Brockton was announced. Members and guests paid a silent tribute to one who was a true friend of the association.

Congress Planned of Slav Fire Brigades

A convention of the Slav Fire Brigades will be held in Prague, the capitol of Czechoslovakia, from June 24 to July 1, 1928.

From June 24 to July 1, there will be fire department drills and exercises, and exhibitions of rescue work. The general assembly of the Slav Firemen Federation and the International Firemen Congress will convene on July 5 at the Town Hall. The seventy-fifth jubilee will be celebrated at the Central Station of the Prague Firemen Corps. Special exercises and entertainment have been planned for each day of the gathering, including the presentation of an opera. During the entire convention there will be discussions on modern methods of fire fighting.

The congress is being held under the patronage of T. G. Masaryk, president of the republic.

Hillside, Ill., Has New Apparatus—Hillside, Ill., has received new apparatus.

PYROXYLIN PLASTIC PLANT EXPLOSION KILLS THREE MEN

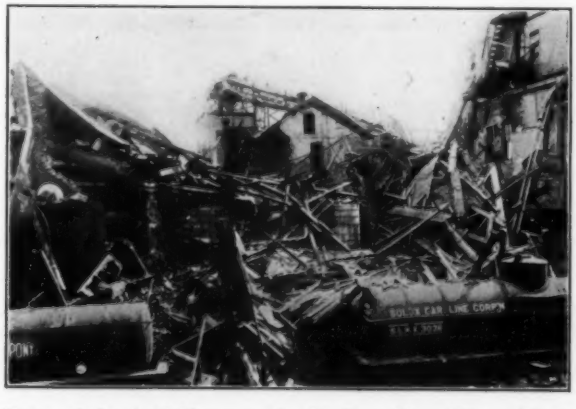
Tank Under Pressure from Live Steam Bursts in Arlington, N. J., Plant of Du Pont Viscoloid Company—Chief Greenfield on Scene Early

AN explosion of a pyroxylin tank under live steam pressure in the acid house at the Arlington, N. J., plant of the Du Pont Viscoloid Company, killed three men, injured about forty, and caused many of the girl workers to become hysterical. The explosion occurred at 8:50 a. m. on June 1.

The Arlington station of the Erie railroad is about one hundred yards from the two story brick and frame building that houses the stabilizing equipment. A train with commuters to New York city was in the station when the blast was felt. As the train was showered with bricks and debris, the first batch of the 3,500 employees at the plant commenced rushing out into the street. The three hundred buildings on the property were emptied in three minutes.

The stabilization process is the second step in the manufacture of fiscoloid, a cellulose compound. Paper pulp is placed in a solution of nitric and sulphuric acids to make it plastic. This pulp is then removed from the nitration vats and put into the fifteen-foot stabilizing tanks under steam pressure to cleanse the material from all acid.

The service superintendent stated that the damage may amount to $40,000. The direct cause was the rupturing of the tank under pressure. Searchers among the ruins hoped to find a small valve that would tell the entire story. It is a safety valve



Ruins of the Acid House at the Du Pont Plant Where Three Men Were Killed and Many Injured

that lets out excessive steam. Company representatives want to examine the valve to learn if the explosion was caused by failure of the valve to operate properly or if it resulted from a weak section in the tank.

Houses for ten blocks about the plant were badly shaken by the explosion. Instinctively all knew that it came from the Du Pont plant, and hundreds rushed to the grounds. Police from Kearny, Arlington and Harrison held the crowds back. Relatives of employees tried to force their way through to learn the names of those who were injured.

Charles Greenfield, chief at the plant and president of the New Jersey Association of Fire Chiefs and the Eastern Association of Fire Chiefs, was soon on the scene and prevented escaping steam from injuring more employees.

First details of the explosion were very meagre for the blast snapped all communication with the plant.

Yeadon, Pa., to Buy Fire Apparatus—Yeadon, Pa., is considering the purchase of fire apparatus.

W. Orange, N. J., to Build Fire House—Plans have been filed for the erection of a fire station in the fourth ward of West Orange, N. J. The land will cost $5,000 and the station $65,000.

Tacoma, Wash., to Build Fireboat—Bids have been invited by Tacoma, Wash., for supplying a new fireboat capable of delivering 7,000 gallons a minute at 180 pounds pressure and traveling eighteen miles an hour. The boat is to be not less than ninety-five feet long and must not draw more than six feet of water when loaded. The boat must be delivered within nine months after the contract is signed.

FIREMEN HURLED IN RIVER AT MILWAUKEE DOWN TOWN BLAZE

Fire Spread Through Unprotected Windows to 13-Story Office Building—Fire Boat Used—Loss Is Estimated at $500,000

THE Black Building, in the heart of Milwaukee's financial section, was destroyed by a fire that started from an unknown cause. The building was fifty years old, five stories high and was being remodeled. It was of semi-mill construction with no partition walls. The brick walls were from twelve to eighteen inches thick.

The blaze was discovered by a night watchman at 6 p. m. He turned in an alarm but before he returned from the corner, the entire building was in flames. It was discovered later that the fire had started in the tower. A second and third alarm were sent in in quick succession.

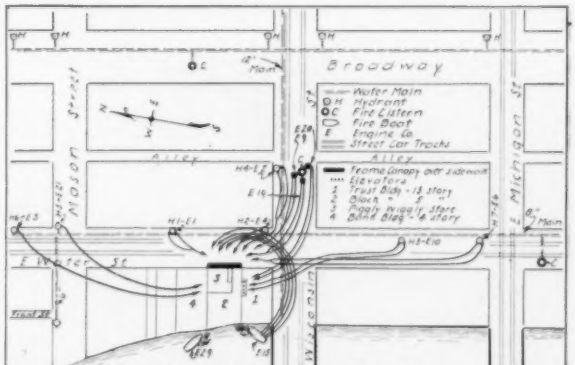
Chief Peter Steinkellner Milwaukee, Wis.

The first alarm brought two district chiefs, Engines 1, 10, 4 and Boat 15; trucks 1 and 2, one boat wagon, one tower and one rescue squad. The second alarm brought a district chief, engines 20, 2, 19, and boat 29, trucks 3 and 4, and one boat wagon. The third alarm brought engines, 3, 6, 9, and 21, truck 7 and a district chief. In all there were 154 officers and firemen including one acting first assistant chief, four district chiefs and others.

The flames scorched the tower of the Trust building and swept menacingly about a bank building. Powerful streams from a fireboat started the collapse of the burning building. Fireboat 15 joined in.

Six members of one truck company narrowly escaped drowning when a wall collapsed and catapulted them into the river. They were on a temporary canopy over the river walk when the north wall crashed. Clinging to the wreckage, the men had roll call in the river to make sure that all were safe. They were rescued by a tug.

Unprotected windows, permitted the flames to enter a thirteen-story office building on the south side. The fire entered the



Sketch of Section That Was Affected by Milwaukee Fire

elevator shaft but luckily the front of the shaft was fireproof and kept the fire from burning through. Otherwise the fire might have spread out on each of the floors.

There was fifty-five pounds water pressure at the hydrants.

In all, twenty-eight hose lines were used and about 8,200 feet of 2½-inch and 1,850 feet of 3½-inch hose was used. Four turret pipes were used from the fire boats and six siamese sets were used at the front of the fire. The water was supplied by direct pumping.

The contents were building materials used in remodeling the building, and the stock of a tobacco store and a grocery firm. The diagram was furnished through the courtesy of Chief Peter Steinkellner, Milwaukee.

WHAT'S BURNING

THE following list includes fires of $25,000 loss and over in the United States and Canada, for the periods designated in the headings. These figures, compiled from telegraphic reports, are based on estimates made at the time, and are subject to latter investigation and consequent revision. Taken as a whole, however, they give an approximately correct view of the losses incurred. The figures represent loss in thousands.

Week Ending June 1

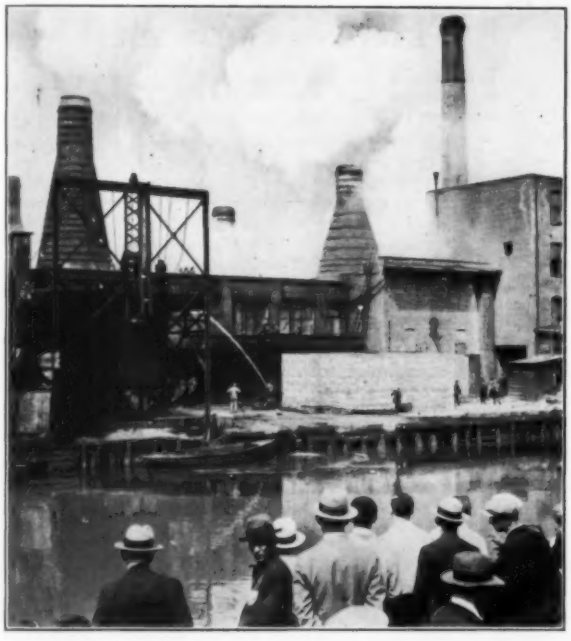
MOUNT HOLLY, N. C.—Baled cotton, American Yarn & Processing Co. 40
PHILADELPHIA, PA.—Bldg. occupied by Club Mirador..... 65
BRANTFORD, ONT.—Several business establishments damaged. 30
FORT WILLIAM, ONT.—Whse. of Johnson and Boone..... 150
WINSLOW, N. J.—Winslow Inn owned by F. W. Robinson.... 80
OKLAHOMA CITY, OKLA.—Long-Bell lumber yards damaged. 200
STAR CITY, SASK.—Property on Main street destroyed..... 80
NECEDAH, WISC.—Property of Wisconsin Power & Light Co.. 65
AMHERST, N. S.—Highland View Hotel destroyed..... 80
WILMINGTON, DEL.—Plant of Beste Provision Co..... 30
GAFFNEY, S. C.—Carroll & Byers Dept. store..... 90
DECATUR, ILL.—W. C. Starr garage and adj. property..... 165
HOLLBROOK, MONT.—Business block destroyed..... 80
FERRIDAY, LA.—Kiln of Holloway Sawmill Co., Inc..... 25
WINK, TEX.—Seven stores destroyed..... 80
BINGHAMTON, N. Y.—G. H. Barlow block damaged..... 90
BIGPRAIRIE, OHIO.—Foundry of Monitor Sadiron Co..... 40
DALLAS, TEX.—Cafe and adj. property, Main St..... 30
BEARDEN, ARK.—Plant of Stout Lumber Co..... 25
UTICA, MISS.—Property of Utica Box Factory..... 40
DELPHOS, OHIO.—Bldg. of Jettinghoff Clothing Co..... 30
WHEELING, W. Va.—Lewellyn Apts., S. York St..... 40
CHICAGO, ILL.—Water damages to stock of Nahigian Bros.... 40
ST. LOUIS, MO.—Bldg. and stock, T. W. Garland, Inc..... 200
KINZER, PA.—Planing mill of J. B. Sener & Sons..... 80
ALEXANDRIA, LA.—Bldg. of Alexandria Grocery Co..... 50

Week Ending June 8

GRAND RAPIDS, MICH.—Wyoming Park Reformed Church.. 65
NEWARK, N. J.—Plant of C. C. Winans Co..... 125
HOUSTON, TEX.—Saint Grain Co., Dowling St..... 65
ABERDEEN, S. D.—Sexton Block damaged..... 65
ARLINGTON, N. J.—Property of Du Pont Celluloid Works.... 35
PERRYVILLE, MD.—Business property destroyed..... 40
MILLS, MASS.—Riverside Hotel destroyed..... 25
BOSTON, MASS.—Huntington Ave. Ballroom damaged..... 40
VANCOUVER, B. C.—Mercantile Bldg., Cordova St..... 40
ALEXANDER, MAN.—Elevator of Manitoba Wheat Producers 35
ST. LOUIS, MO.—Home of Lorentz Lazerine destroyed..... 25
MEADVILLE, MO.—Bldgs. in business district..... 40
RHINELANDER, WIS.—Residence of Mont Tennes of Chicago. 80
CHICAGO, ILL.—Ascher's Dept. store..... 100
PORT WASHINGTON, N. Y.—Boathouse of F. D. Carney.... 65
TROY, TENN.—Eight business structures destroyed..... 45
BROOKFIELD, MO.—High School destroyed..... 30
NEW ORLEANS, LA.—W. B. Seymour & Co. and adj. property.. 50

An Imitation of Chicago's Famous Fire

Fire broke out in a theatre in the Borough Hall Section of Brooklyn, N. Y., that was showing the motion picture "Chicago After Midnight." The fire department extinguished the blaze in the basement before it became too realistic of the Chicago conflagration. A large crowd was attracted by the apparatus.



Straw Fire Makes Smoke Screen on New Jersey Shore

A three-alarm fire badly damaged the plant of J. H. Gautier & Co. in Jersey City, N. J. The extra alarms were turned in because of the large amount of straw stored in the building which is in the midst of the river front district. The cause of the fire is not known. A heavy smoke hung over the river and Jersey shore district.

NORTHFIELD, VT.—Universalist Church destroyed..... 35
COHOES, N. Y.—Storehouse of Putnam Knitting Co..... 40
GRIFFIN, ARK.—Whse. Gulf Refining Co..... 40
RIVERSIDE, WASH.—Riverside school destroyed..... 25
SUNAPEE, N. H.—Central high school damaged..... 40
KENTLAND, IND.—Ainsworth-Boone Seed Corn Warehouse.... 55
FERRIDAY, LA.—Local ice plant damaged..... 40
MINNEAPOLIS, MINN.—Plant of Shaw-Enochs Tractor Co..... 165
MURRAY, UTAH.—Rocky Mt. Packing Corp..... 160
TRUMANN, ARK.—Property owned by J. A. Cash..... 25
WINNIPEG, MAN. CAN.—Canada Biscuit Co. plant..... 50
FRESNO, CALIF.—Valley Body & Radiator Works..... 45
WAITSBURG, WASH.—Empire Theatre and Amer. Legion Hall. 25
GAFFNEY, N. C.—Carroll & Beyers Dept. store damaged.... 60

Eight Injured on False Alarm Run

Either the inquisitiveness or maliciousness of a four-year-old boy, son of a New York city policeman, resulted in the injury of seven firemen and the driver of a coal company's truck.

The youngster decided that he would see what would happen if he pulled the handle on the red painted box. He did. From all directions, came fire apparatus in answer to the call.

Engine Company 241 struck a large truck with almost serious results. The trucks side swiped each other and firemen fell off in all directions. The apparatus hit a curbstone and snapped off its two front wheels. The truck jumped across the opposite sidewalk, knocked down a three-foot retaining wall and came to rest against the side of an apartment house.

Only one fireman was so injured as to be removed to a hospital for treatment. The others were treated by ambulance doctors. The coal truck driver was hurt and later arrested for refusing to yield his right of way to fire apparatus.

Upland, Cal.—Upland, Cal., is planning the addition of more fire apparatus. G. A. Brest is the fire chief.

Woodland, Wash., Erecting Fire Station—The foundation has been completed for the new fire station in Woodland, Wash. Members of the department have donated considerable labor.

Mountain View, Cal., to Have Rural Protection—The supervisors have acted favorably on a plan submitted by Mountain View, Cal., for rural fire protection. Probably $10,000 will be spent for new apparatus.

OF INTEREST TO VOLUNTEER FIRE DEPARTMENTS

WHAT ARE YOU GOING TO DO ABOUT THE FOURTH OF JULY?

Fireworks Hazard in Villages and Towns Is Even Greater Than in Larger Cities—Chance for Good Missionary Instructions

WHAT are you going to do about the Fourth of July?

It is almost possible to visualize one of the easy-going chiefs of a volunteer department, tilt back on his chair and remark that it is now but June and that it is time enough to worry about such things when July comes around.

But such is not the case. It is none too early to map out some campaign and to fix the stand that the fire department will take on the fireworks question. The chances are that salesmen from some of the fireworks concerns are now booking orders in your town for July delivery.

Just to get down to cases, forget the possible injury from fingers being blown off, from lockjaw cases, from loss of sight, from unsightly burns, from countless other injuries, and merely consider the fire hazard. After all, firemen must consider such dangers.

Such hazards are even greater in the smaller communities. In the larger cities, there are more brick and stone buildings, and structures constructed along slow-burning design. There are not so many wooden buildings with wooden shingle roofs, and the chances to stop an incipient blaze before it has developed into a large fire, are much better. The runs are shorter in a city and there is better coverage from the many companies. And yet the larger municipalities consider this to be of sufficient importance to pass legislation prohibiting the sale and discharge of fireworks.

Each of us is interested in our own personal welfare. We may be indifferent to matters that are of remote connection to ourselves. Therefore let us see what the sale of fireworks may mean to the work of a volunteer fireman.

The Fourth of July is a holiday of outings. It is a chance to take the family automobile and go visiting friends in nearby towns or to go off into the woods for a picnic. People in the city leave for the country, and those in the country make an exodus to other communities. Consequently the number of volunteer firemen that are available on the Fourth of July is far less than on some other day. If several fires occur, no matter how small, the town may find it necessary to call on outside aid.

No volunteer fireman cares to go chasing around the town extinguishing fires, when there are far more pleasant things to do. Calls for fires on this day are not prompted by conflagrations. They are caused by sky rockets landing on wooden roofs, by Roman candles being pointed towards combustible material and so forth. But these small fires, which under favorable conditions may develop into serious incidents, come in sufficient volume to keep the department on the go most of the day. Even a paid fire department may find such activity disagreeable, but the volunteer is thus prevented from enjoying a day's pleasures he has long anticipated.

Much can be done to safeguard the enjoyment of the Fourth of July. The community can take steps to prevent the sale of fireworks within the town or village limits and to try to prevent the discharge of fireworks within such boundaries. It is not an easy task. There will be a great deal of opposition from merchants who profit each year from the sale of such articles. There may be a fight on the part of manufacturers. But the problem must be solved once for all, and there is no time like the present.

Perhaps your town has been fortunate and has not had any fires that may be traced directly to the discharge of fireworks. But considering the law of averages, the chances that your community will escape again this year are very poor. According to statistics compiled each year after this holiday has gone by, most communities report some fire damage and either personal injury or loss of life.

If your town is the progressive community that you believe it is, the population this year is greater than that of last year. The chances of having fires from fireworks are therefore better at this time, and they will become even greater in the years to come. Added population, added buildings, and more closely built up sections are ideal conditions for increasing this type of fire hazard.

Work now for legislation that will safeguard your town. Even though you may be too late this year to do very much good, for legislative machinery moves very slowly in some places, you will have started something that will protect your community next year and for many years to come. It is a chance to show the progressiveness of your fire department.

There are still a few weeks left to the school year. Talk to the school children and explain to them the great dangers resulting from unorganized fireworks displays. Tell them of the property hazard, the dangers to life and the chances for personal injury. Carry the same message to the Sunday school children, to the Boy Scouts, Camp Fire Girls, Girl Scouts and other children's organizations. It is possible that such instruction will bear fruit in your town.

What are you going to do on the Fourth of July? Your fire department should decide now.

Vincent Heads Iowa Fire Association

Ralph G. Vincent of Des Moines, Ia., has been elected president of the Iowa State Fire Prevention Association. J. H. Bunten, last year's secretary, has been elected vice-president and C. W. Borrett, a former secretary and vice-president, has been named secretary-treasurer.

The association is made up of prominent fire insurance men in Iowa and the organization plans to make surveys of a number of Iowa cities.

Cos Ccb, Conn., Votes for Fire House—A fire house will be erected in Cos Cob, Conn. The fire department has voted to add $15,000 to the town's appropriation of $25,000.

Macedon, Pa., May Vote on Fire Apparatus—Macedon, Pa., is considering the purchase of fire apparatus. An election on this question may be held soon.

Lucedale, Miss., Organizes Department—A fire department has been organized in Lucedale, Miss., on orders of the mayor. S. M. Alysworth is chief.

Promotional Examinations to be Held in Long Beach—Promotional examinations will be held in Long Beach, Cal., for assistant chief and for five battalion chiefs. The present office holders have been appointed and have not passed any civil service examination.

HERE IS WHAT CAN BE DONE IN RAISING HOSE TO THE 35TH FLOOR

Test Conducted in Detroit Emphasizes Time Necessary to Lift Hose When Elevators Are Out of Service and Standpipe Is Not Completed

SINCE New York City has had a fire in the Sherry-Netherlands Hotel and was handicapped by the lack of elevator service and an uncapped standpipe, fire chiefs in larger cities have been considering just what to do, if their city had a similar incident. Formerly, few cities had tall buildings. Today, due to the present high value of suitable land, it has become necessary to build upwards in order to get a profitable return on the investment. Each city of an appreciable size therefore has some building that comes within the so-called sky-scraper classification.

Many fire department officers have submitted methods of just how they would get water up to the thirty-fifth floor of a building under conditions similar to the hotel fire. The problem is considered of such importance that it was made an important part of New York City's examination for captain and it was considered at the International Association of Fire Chiefs convention in Portland, Ore.

But Detroit is the first city to actually try by test, just what can be done when both the elevators and standpipe can not be relied on. The experiment was made at the Greater Penobscott Building which has forty-seven floors. No special equipment was used other than a hose roller designed for this occasion and since adopted by the Detroit Fire Department as standard equipment. Walter F. Israel, second assistant chief, made his report on the test to S. J. De May, chief of department.

Engine Company No. 1, used in making the test, was placed on the Fort street side of the building, and an officer and six men were ordered to proceed up the stairway to the sixth floor, place a hose roller on the window sill and lower a weighted hose rope to be attached to a line of 2½-inch hose from the apparatus. At the same time, another officer with nine men were ordered to the twelfth floor where they placed a second hose roller on the window sill and lowered a weighted hose rope to the sixth floor. Here it was attached to the hose when it arrived at this point. In the meantime, an officer and fourteen men were ordered to the eighteenth floor and they too placed a hose roller on the window sill. They lowered a weighted rope to the twelfth floor where it was attached to hose at this point.

Each crew carried a plaster hook to assist in bringing lines into windows. When the first fifty-foot section of hose entered the building over the hose roller at the eighteenth floor, it was disconnected, folded and immediately taken to the thirty-fifth floor. Six more sections were disconnected in the same manner. Four were used to complete the back stretch down the stairway from the thirty-fifth floor to the eighteenth floor; the other two sections were rolled and taken to the twentieth and thirty-fifth floors for possible emergency use. Operations from the eighteenth to thirty-fifth floors were carried out by one officer and twenty men who also carried nozzle, holder, axe and plaster hook to the thirty-fifth floor.

While this was being done, Deputy Chief Thompson who was in charge of operations on the ground, had ordered two two-hundred feet lines of 3-inch hose laid from the apparatus of High Pressure Company No. 1 from a hydrant at the southeast corner of Fort and Griswold streets to the base of the building. Here it was siamesed to the 2½-inch hose which had been taken up the side and stairways of the building. Engine Company No. 1 had connected to the hydrant and the standard department signal was given to "play away."

Ropes were attached to all couplings on hose outside of the building as a safety measure in case the hose burst. Sixty-one men including officers were used in making the test. This is the same number that would have responded on a first alarm in that location.

Notes were taken on the time required to place the hose, pressures used in supplying water, and other data. They are as follows:

Starting time	6:01 and 20 seconds
Hose raised to 6th floor	6:05 and 40 seconds
Hose raised to 12th floor	6:07 and 30 seconds
Hose raised to 18th floor	6:09 and 20 seconds
All hose raised to 18th floor	6:11 and 20 seconds
Hose to 35th floor	6:19 and 35 seconds
Order to play away	6:19 and 35 seconds
Actual starting time to pump water	6:21 and 25 seconds
Water at nozzle	6:22 and 15 seconds
Time	21 and 15 seconds
Pressure on engine	365 pounds
Nozzle pressure	50 pounds
Gallons per minute	351 pounds
Size of tip	1¼ inches

After this test had been made, two hundred feet of 2½-inch hose were substituted for the two hundred feet stretch of 3-inch hose which led to the base of the building in the first test. With a single 2½-inch line eight hundred feet long leading to the forty-third floor, the following results were obtained:

Engine pressure	440 pounds
Nozzle pressure	40 pounds
Gallons per minute	292

It is the opinion of Chief Israel that more lines of hose could be taken to the thirty-fifth floor in about fourteen minutes each, after the first line is secured in place, as most of the men would be in position to carry out operations.

The figures obtained in this test are of particular interest. Although many chiefs suggested means for carrying out orders under such adverse conditions, it was only possible for them to estimate the results of such schemes. The Detroit tests indicate what can be done.

London Has Large Lumber Yard Fire

Large crowds were attracted to a fire in piles of lumber at a factory at Old Ford, a section near London. The plant was located adjacent to the Regents Canal.

Riverhead, N. Y., May Buy Pumper—In July, Riverhead, N. Y., will vote on the purchase of a pumper for $6,500.

Carlsbad, Cal., to Buy New Equipment—Funds are being raised in Carlsbad, Cal., for the purchase of new fire equipment.

Headquarters Urged for Mt. Vernon, N. Y.—The mayor of Mount Vernon, N. Y., is urging the construction of a fire headquarters building to make possible the centralization of fire equipment. The cost of the new building would be reduced by the sale of the old property.

SUGGESTION ON HOW WATER SHOULD BE RAISED TO 30TH FLOOR FIRE

Answer to Question Submitted by New York Fire Department at Promotional Examinations—Various Factors Considered in Problem

By WM. H. CRAMER, Chicago Fire Department

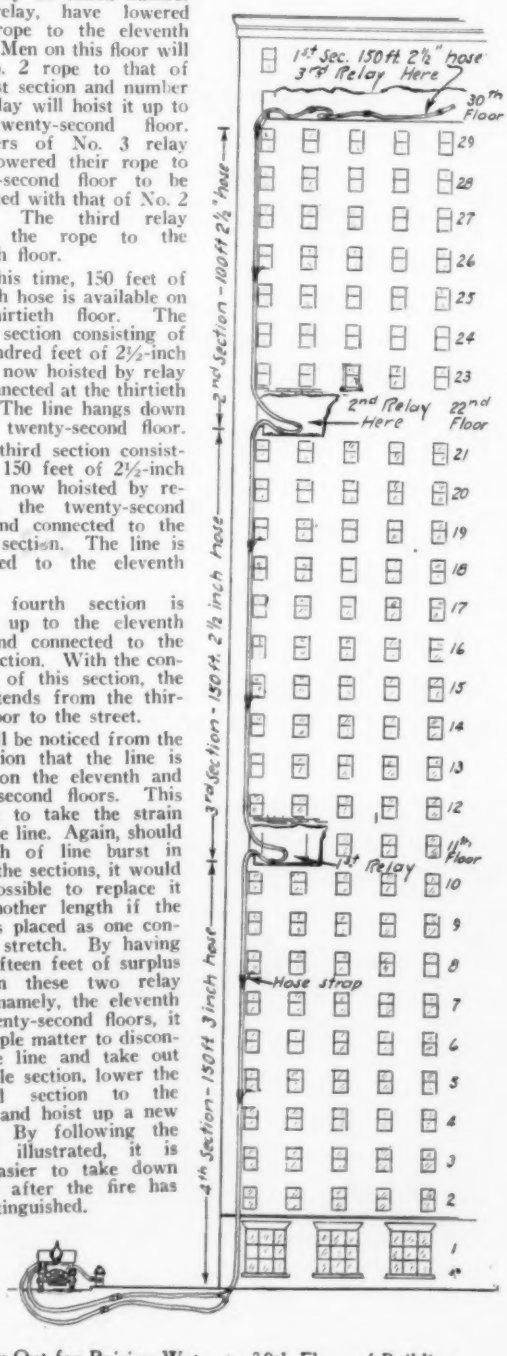
TO get water to the thirtieth floor of a burning building in which the standpipe is not installed and where elevators are not in operation, it will be necessary to have number one relay consisting of seven men and equipment as indicated, hoist up the first section to the level of the eleventh floor. In the meantime another group, that may be called number two relay, have lowered their rope to the eleventh floor. Men on this floor will tie No. 2 rope to that of the first section and number two relay will hoist it up to the twenty-second floor. Members of No. 3 relay have lowered their rope to twenty-second floor to be connected with that of No. 2 relay. The third relay hoists the rope to the thirtieth floor.

At this time, 150 feet of 2½-inch hose is available on the thirtieth floor. The second section consisting of one hundred feet of 2½-inch hose is now hoisted by relay and connected at the thirtieth floor. The line hangs down to the twenty-second floor.

The third section consisting of 150 feet of 2½-inch hose is now hoisted by relay to the twenty-second floor and connected to the second section. The line is connected to the eleventh floor.

The fourth section is hoisted up to the eleventh floor and connected to the third section. With the connection of this section, the line extends from the thirtieth floor to the street.

It will be noticed from the illustration that the line is looped on the eleventh and twenty-second floors. This is done to take the strain from the line. Again, should a length of line burst in any of the sections, it would be impossible to replace it with another length if the line was placed as one continuous stretch. By having about fifteen feet of surplus hose on these two relay floors, namely, the eleventh and twenty-second floors, it is a simple matter to disconnect the line and take out the whole section, lower the damaged section to the ground and hoist up a new length. By following the practice illustrated, it is much easier to take down the line after the fire has been extinguished.



Lay-Out for Raising Water to 30th Floor of Building

Hose straps should be placed on various floors as illustrated to relieve the strain in the line. Ropes should be used on the eleventh, twenty-second and thirtieth floors to tie the hose in on those floors. The same ropes could be used that were originally employed to hoist up the hose.

To eliminate the possibility of a burst section from sudden pressure, it is best to use an open pipe not a shut-off nozzle. If it is neecssary to close the line before the engine could be operated, the pipe could be directed so that the stream will go out of a window.

The hose layout would be as follows: two parallel lines of 3-inch hose one hundred feet long and then siamesed into the 3-inch line that constitute section number four. At a fire of this kind, thirty pounds nozzle pressure should be sufficient. A 1⅛-inch nozzle at this pressure discharges 205 g.p.m. The resulting engine pressure will be 259 pounds determined in accordance with the following formula:

Engine Pressure = Nozzle Pressure (1.1 + KL).

K for a 1⅛-inch nozzle is .167, L the lengths of hose in this instance is determined as follows:

There are eight lengths of 2½-inch hose and 150 feet of 3-inch hose which when reduced to 2½-inch equivalent by dividing by 2.6 is 57.7 feet of 2½-inch hose. The two one hundred feet lines of 3-inch hose from the engine to the siamese equals 10.6 feet of 2½-inch hose as found by dividing 100 by 9.35 which is the factor for two lines of equal length of 3-inch hose. To this is added the eight lengths or four hundred feet plus 57.7 or

$$400 + 57.7 + 10.6 = 468.3$$

This is divided by 50 to get the value for L. The result is 9.36. Substituting back in the formula, the engine pressure is found to be 102.68. To this must be added the back pressure due to elevation.

$$360 \times .434 = 156.24$$

Adding the two values together, the resulting engine pressure is 258.6. This is the engine pressure to obtain a nozzle pressure of thirty pounds at the high elevation.

INSTRUCTIVE TALKS SCHEDULED FOR ILLINOIS SHORT FIRE COURSE

Fourth Course to Be Held June 19-22 at the University of Illinois—Demonstrations and Work Arranged at New Drill Tower on Grounds

FIREMEN must have proper instruction. To meet the demand for proper information on the subject of fire-fighting, fire prevention and kindred subjects, the short course has been established, and the idea has so taken hold that similar courses are planned for other universities during the summer. At these schools, talks are given by men who are recognized as leaders in their particular field of work.

A program has been arranged for the fourth annual course that will be held at the University of Illinois, Urbana, Ill., on June 19-22. The Illinois Firemen's Association is very much interested in the success of this scheme of instruction. Those wanting additional data on the course should write to Assistant Chief Roy W. Aslip, Champaign, Ill.

The course has been balanced with lectures and practical work and demonstrations. To relieve the school work, a fish fry has been arranged late in the afternoon of the second day. The program follows:

Tuesday, June 19—Morning

8:30—Registration, 221 Engineering Hall.
10:00—Address of Welcome—Milo S. Ketchum, Dean College of Engineering, University of Illinois.
10:30—The Short Course—Thomas J. Ruddy, Joliet, Illinois, President, Illinois Firemen's Association.
11:00—From the State Fire Marshal's Point of View—S. L. Legreed, State Fire Marshal, Springfield, Illinois.

Afternoon

1:00—General Lecture: What the Fireman Should Know About First Aid—Rescue Work—Artificial Resuscitation—Room 221, Engineering Hall, Harry K. Rogers, Engineer, Western Acturial Bureau, Chicago.
2:30—Demonstrations and Instruction in the Practice of First Aid—Rescue Work and Artificial Resuscitation—Harry K. Rogers and Assistants.

Wednesday, June 20—Morning

8:30—Should Small Cities do Salvage Work?—(Lecture and Discussions) Room 221, Engineering Hall, Edward F. Clark, Rockford, Illinois.
10:00—Facts and Figures of Fire Fighting—(Lecture and Discussions) Captain J. J. Conway, Cincinnati, Ohio.

11:00—The Training of Firemen—Chief Edward F. McGurn, Chicago Fire Department.

Afternoon

1:00—Methods and Demonstrations of the Training of Firemen—The Training Tower, Wright Street and I. T. S. Tracks—Chief Edward F. McGurn, Drill Master, Chicago Training School.

4:00—Leave for Fish Fry at White Heath, Illinois.

Thursday, June 21—Morning

8:30—Spontaneous Combustion of Various Products—Room 221 Engineering Hall—D. J. Price, Engineer, U. S. Bureau of Chemistry and Soils, Washington, D. C.

10:00—Automatic Sprinkler Installations—Ira G. Hoagland, Secretary, National Automatic Sprinkler Association, New York City.

11:00—Demonstration of Automatic Sprinkler Operation—(At the Tower)—Ira G. Hoagland and Assistants.

Afternoon

1:00—The Fireman's Responsibilities With Regard to Modern Methods of Training and Use of Equipment—Room 221 Engineering Hall—Harry K. Rogers.

2:00—Demonstrations in Training and Use of Equipment—The Training Tower—Under Direction of Chief Edward McGurn, Drill Master, Assisted by a Squad from the Chicago Fire Department.

Friday, June 22—Morning

8:30—The Theory and Importance of Ventilating Burning Buildings—Room 221 Engineering Hall—Harry K. Rogers.

10:00—Fire Department Hydraulics—Fred Shepperd, Managing Editor, FIRE ENGINEERING, New York City.

Afternoon

1:00—Demonstrations and Instruction—Hose Layouts, Quick Pressure Calculations, Relation of Mains and Hydrants to Fire Streams—The Training Tower—Fred Shepperd and Assistants.

Pelham Manor Department Reorganized

(*Continued from page* 504)

whose career in the village started years ago when he was hired to light the street lamps in the gas and kerosene age. He had forty-nine volunteer firemen and the same five paid-part-time firemen now serving under Chief Brennan.

The department has a 1,000-gallon American-LaFrance pumper, and a fifty-five foot city service truck, each equipped with a forty-gallon chemical tank. The pumper has 800 feet of canvas-rubber lined hose. There is no fire alarm telegraph, although 30 dummy box locations exist. Alarms are telephoned to the Village Hall, where the paid police sound the fire call on the village whistle—one round for a brush fire, two rounds for an automobile and three if the fire is in a building. One of the largest buildings, or group of buildings, is the country club house of the New York Athletic Club on Travers Island, a step off the mainland of Pelham Manor.

What Caused the Change

Last winter, an unoccupied mansion burned to the ground. The Village Trustees—all far sighted and matter-of-fact business men—asked why. They answered themselves by waiting on Fire Chief John Kenlon of New York City to ask him if he knew of anybody who would take the job of reorganizing Pelham Manor's volunteer fire department. Chief Kenlon looked over his list of recently retired chief officers, and he sent for Chief Brennan who at first was not inclined to entertain the offer, having in mind the recollection of the turbulent reorganization of the Yonkers and New Rochelle volunteer departments near by.

The Pelham Manorites met Brennan's terms and conditions and he accepted, but before appointing him, the Trustees, however, satisfied they might have been with Chief Kenlon's recommendation, sought to test Brennan themselves. They asked him to devote a month's time to making a survey, which he did and some of the conditions he brought to the attention of the authorities startled them. Water mains supposedly four and six inches had corroded to the size of a garden hose. In brief, Chief Brennan told the Trustees the naked truth. He exacted from them a gentlemen's agreement that he would have a free hand. They said in effect—"Go ahead—the job's yours—we'll hold you responsible."

There is a Village Law in New York State which provides that if the Fire Department of a Village is to be abolished in whole or in part, it must be by a referendum vote of the taxpayers of the village—the owners of real property who have resided four months in the county and 30 days in the district.

Result of a Lively Campaign

A lively campaign was waged by both sides and it was most acrimonious. Both sides resorted to paid newspaper advertising, handbills, mass meetings and personal solicitation. Chief Brennan maintained a neutral attitude. The quarrel was not his, he said, so much as it was a domestic spat among old neighbors. The Village Trustees publicly charged that the Fire Department was inefficient; that the volunteers had not kept in training; that the Trustees had no control over the department because it was a separate incorporated institution. The volunteers, or such of them as constituted the campaign committee, fired back and reminded the Trustees that the firemen had been faithful in the past, etc. They appealed mainly to Auld Lang Syne.

The Trustees caused bold headlines to be published like this:

"SHALL THE FIRE DEPARTMENT RUN THE VILLAGE OR SHALL THE VILLAGE RUN THE FIRE DEPARTMENT?"

The announcement by spokesmen for some of the firemen that they would not serve under a paid fire chief caused them to lose ground with the people. The volunteers advertised that the village treasury would suffer from extravagance, that Chief Brennan would spend so much money that he would bankrupt the place, that he intended to get all paid men on full time, a lot of new apparatus and similar charges, but it was all in vain—the result is now history.

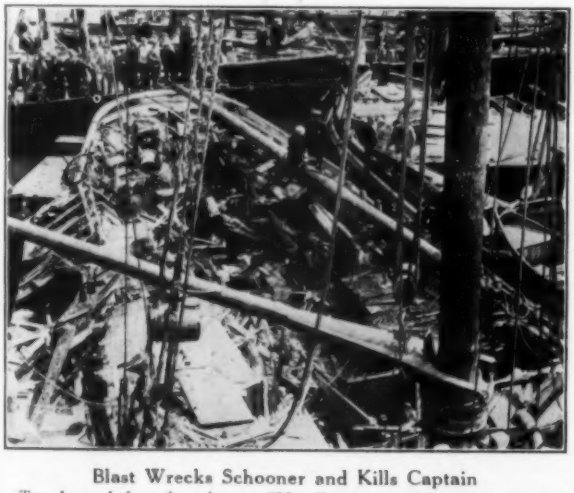
Board of Fire Commissioners Appointed

Mayor Alliot C. House has appointed a Board of three Fire Commissioners to replace the former volunteer fire fighting authority. This Board will handle the administration of the reorganized Fire Department of Pelham Manor and to the Board will Chief Brennan be accountable.

When the volunteers disclosed that they would not respond to fires under the new chief, Brennan immediately communicated with Chief Kenlon of New York, Chief Jones of New Rochelle and Chief Gibson of Mt. Vernon, all of whom promised him apparatus and men if any emergency should arise. With such reinforcements to the south, the north and the west (nothing lies east of Pelham Manor) a strike by volunteer firemen would be only a gesture.

Coincident with his appointment, Chief Brennan bought a cozy home of his own in Pelham Manor and is now a landowner himself.

Portland, Ore., Extending Fire Alarm—Portland, Ore., has invited bids for supplying sixty miles of wire to be used in extending the fire alarm system.



Blast Wrecks Schooner and Kills Captain

Two hours before the schooner "Mary" was to weigh anchor, the boat was blown to bits by an explosion that also killed the captain and broke windows all along the Gloucester, Mass., water front. The explosion is believed to have occurred in the engine room. The boat caught on fire immediately after the explosion. The illustration shows the schooner tied up at Gloucester after the accident.

PER CAPITA FIRE LOSS FIGURES TOPIC AT N. J. CHIEFS' MEETING

Subject Prompted by Circular Letter Mailed by Massachusetts Fire Chiefs' Club—Leon A. Watson Main Speaker at Irvington Meeting

CONTRARY to popular conception, most fires are not caused by carelessness but by false economy. This angle to the situation was brought up by Leon A. Watson, of the New Jersey Schedule Rating Office, who was the principal speaker at the second quarterly meeting of the New Jersey State Fire Chiefs' Association held in Irvington, N. J., on May 31.

Harry J. Stanley, director of public safety, welcomed the chiefs in the absence of Mayor Green. Mr. Stanley hinted at some entertainment that would follow later in the day.

Fred A. Trowbridge, secretary, reported that 495 members had joined the I. A. F. C., and 139 had paid dues to the Eastern Association of Fire Chiefs. Eighteen men had joined the New Jersey chiefs since the February meeting, thus bringing the total membership up to 680.

R. M. Cadman, chairman of the hose standardization committee, reported that seven cities and towns and six industrial plants had converted their thread to the National standard specifications since the last meeting.

Mr. Watson stated that he had been asked to discuss the circular letter sent out by the Massachusetts Fire Chiefs' Club. He said that the per capita loss figures were not used in establishing rates but are merely used for comparative purposes. He said:

"I don't think they are fair and I don't like to use them."

Such figures are used to answer questions submitted by chiefs on the fire losses of various cities.

An example was brought up of the town of Linden where some industrial plants were located. Due to local conditions the workers lived in Elizabeth and traveled to Linden in the morning and back to Elizabeth at night. In figuring the per capita fire losses, the stable population was used, and the hundreds of migrating workmen who formed a large part of the day population were not considered.

But a few of the total number of fires produce large fire losses. This is because there is a great deal of high value concentrated in one location. Adverse conditions bring about large fires that cause such losses. Only five per cent of the total cause the major losses.

The losses are not due to carelessness as so many are made to believe, but they are the outcome of false economy. Poor building construction also causes major losses and most claims are in industrial and mercantile buildings. The average residential loss is about $2,000. Buildings in a congested section must be constructed properly.

Chief McGinley of East Orange read a paper on "Loyalty, Fire-Fighting and Patriotism," as a contribution from the Essex County Unit. Chief H. W. Breder of Egg Harbor City, prepared a paper on "Benefits of a Chiefs' Unit," as the contribution of the Atlantic County Unit.

The round table discussion brought out some questions on refrigeration hazards, a light to be able to distinguish fire apparatus at night, restricting the speed of fire apparatus, and others.

Chief Towey of Newark spoke on the installation of private fire alarm boxes in schools and public institutions. Many chiefs spoke on this subject. The angle was accentuated of a town with a volunteer system and where an audible alarm is necessary. In such an instance, it was brought out, a special box would bring out a number of frantic mothers and would cause undue worry and excitement.

The meeting was well planned. It was held in the auditorium of the Elks Club. The forward part of the room was arranged for the meeting, and tables for luncheon were placed in the rear. It was not necessary to lose any time. During the meal, Director Stanley arranged for music by the orchestra of the Irvington High School and by the Irvington Police Band. There were a number of banjo selections and also community singing.

In appreciation of the excellent arrangements made by Mr. Stanley, he was voted an honorary membership in the association.

President Greenfield spoke on the Eastern Association of Fire Chiefs and the I. A. F. C. He said that all officers in the New York and Philadelphia fire departments had joined the Eastern section one hundred per cent. He was very optimistic concerning the future of this group.

Those who attended the meeting are as follows:

Elias S. Amerman, Morristown.
Geo. F. Baier, New Brunswick.
A. E. Baker, Maplewood.
John Banker, New Brunswick.
Harry I. Becker, So. Orange.
O. F. Beutell, Red Bank.
Robert Beyer, Keansburg.
A. O. Bissell, Irvington.
G. R. Bodine, Long Branch.
W. J. Bond, Union.
H. W. Breder, Egg Harbor City.
George Brown, Trenton.
J. Buono, Hawthorne.
R. M. Cadman, Red Bank.
Daniel Carr, Merchantville.
Harvey Campbell, Irvington.
Albert Chamberlain, Hillside.
L. A. Chappelle, Passaic.
S. B. Conver, Ocean City.
A. J. Coventry, Rahway.
E. P. Crater, Gladstone.
John Crogan, Newark.
John A. Croghan, Irvington.
E. F. Daniher, Madison.
Wm. Davie, Rutherford.
F. C. Decker, Westfield.
Louis E. Dinesen, Dumont.
M. J. Donohue, Rutherford.
Thos. Dowd, Elizabeth.
N. J. Dunn, Irvington.
Geo. K. Egan, Hackensack.
Horace O. Emsley, Hightstown.
N. S. Erhart, N. Y. C.
A. B. Fembeck, Demarest.
Estelle M. Finnerty, Bloomfield.
Chas. H. Fischer, N. Y. C.
James D. Fowler, Dumont.
Howard Fox, Oaklyn.
Wm. F. Garrety, Bayonne.
W. Albert Gray, Irvington.
Chas. W. Greenfield, Kearny.
H. J. Groom, Englishtown.
Chris. H. Hasselhuhn, Carlstadt.
B. S. Hearlin, Dumont.
Fred Helmlinger, Jr., So. Orange.
Fred A. Helmlinger, So. Orange.
Geo. Hughes, New Providence.
Richard A. Jessen, Keansburg.
R. Jessen, Keansburg.
Chas. F. Johnson, Harrison.
Irvin Johnson, Ocean City.
T. E. Johnson, Irvington.
T. Howell Johnson, Newark.
Geo. E. Kauffman, Keansburg.
James T. Keegan, Newark.
M. T. Kennedy, W. Orange.
E. B. Kingsbury, W. Orange.
Walter H. Klipp, Keansburg.
F. H. Knapp, Harrison.
Geo. E. Koeber, Bloomfield.
A. N. Koehler, Somerville.
Harry Lafferty, Irvington.
James J. Lafferty, Irvington.
John L. Lehman, Bloomfield.
John F. McConnell, Newark.
E. M. McCool, Bloomfield.
C. A. McGinley, Irvington.
John A. McIntyre, Morristown.
Wm. S. McLoughlin, Bayonne.
James J. McMillan, Orange.
Harry Manker, Bernardsville.
Frank Miller, Linden.
G. B Milliken, Bloomfield.
Geo. S. Mitchell, East Orange.
Frank Morrisey, Irvington.
Daniel Mozer, Trenton.
M. Murphy, N. Y. C.
Thos. G. Murray, E. Newark.
Richard E. Neumann, Merchantville.
Fred Niclas, Rochelle Park.
L. H. Nuse, Bernardsville.
Arthur H. Olbers, East Orange.
A. T. Panahan, Harrison.
John W. C. Pape, Bergenfield.
N. S. Parmelee, Newark.
Adam Pavlich, Wallington.
Louis Pfirmann, Westfield.
Henry M. Phillips, Hammonton.
K. F. Pierce, Kearny.
A. V. Pierson, Hightstown.
Thos. Pryor, Dunellon.
Wm. Proff, Carteret.
Harry C. Rapp, Carteret.
Andrew Rhine, New Brunswick.
K. V. Ridley, Teaneck.
W. H. Ritzman, Rahway.
Adam A. Ritter, Clifton.
Harry L. Rose, Newark.
Arthur Russey, Glen Ridge.
Louis Sass, New Brunswick.
D. M. Shea, Madison.
Louis E. Scherrer, Roselle Park.
Jacob Schlick, Keansburg.
F. A. Schultz, Hasbrouck Heights.
M. Shagen, Wallington.
James S. Sheehan, W. Orange.
A. P. Smith, Madison.
E. M. Smith, N. Y. C.
Frank P. Smith, East Newark.
Robt. L. Smith, Ocean City.
E. S. Spinning, Bernardsville.
Harry H. Stager, Nutley.
F. J. Stanley, Irvington.
B. C. Stavely, Boonton.
O. W. Steidel, Hasbrouck Heights.
Henry Stolz, Bound Brook.
S. B. Taylor Wrightstown.
John E. Tracy, Wrightstown.
H. A. Tice, Ridgewood.
John J. Towey, Newark.
Harry J. Travis, New Brunswick.
Fred A. Trowbridge, Morristown.
Jules F. Uzdilla, N. Y. C.
Walter B. Vonah, Carteret.
Leon A. Watson, Newark.
C. P. D. Weeks, Hackensack.
Fred Wied, New Providence.
L. R. Wilson, Madison.
N. N. Wolpert, N. Y. C.
Jas. A. Woods, Bernardsville.
H. S. Worman, Boonton.
Harry Wright.
John A. Zarhardt, Plainfield.
Wm. Ziegler, Hackensack.

Queens Borough to Have New Fire Stations

New York City is considering the erection of four new fire stations in the Borough of Queens—one each in Flushing, Hillcrest, Douglaston or Little Neck, East Elmhurst and Rosedale. Definite locations have not been selected.

For some time Flushing Hillcrest residents have urged location of a fire house in that community, pointing out that in case of fire some time is required for companies from either Flushing or Jamaica to reach the section.

Recently Commissioner Dorman visited the community for a personal inspection of the situation, and inclusion of Flushing Hillcrest in the list for submission next week is regarded as a result of this visit.

East Elmhurst, a community of frame dwellings, also has sought location of a fire house in that community for some time, civic organizations and residents pointing out that the nearest fire houses at present are located in Jackson Heights and Astoria.

Selection of a site for a fire house to serve Douglaston and Little Neck brings the passing of the volunteer companies of the two communities, in existence for a quarter of a century, a step nearer consummation.

Several months ago the city fire alarm telegraph system was extended to include Douglaston and Little Neck and units located in Bayside and Flushing were directed to respond to alarms, the former to all alarms and the latter in the event of a serious fire. Previously the two communities had maintained their own alarm system, using a siren placed on the Douglaston pumping station.

Following approval by the board title will be acquired to the sites submitted and plans and specifications will be prepared for bids for construction. It is hoped actual work will be under way on all four houses by fall. Each building will have space for quartering an engine and a truck company.

NEW ENGLAND DIRECTORS MAKE FINAL ARRANGEMENTS FOR THE CONVENTION

Meet at Boston to Perfect Plan for Big Meeting at Burlington—The Program—List of Exhibitors at the Convention

A MEETING of the Board of Directors of the New England Association of Fire Chiefs was held at the Parker House, Boston, Mass., on June 6, to complete final arrangements and details of the Sixth Annual Convention to be held in Burlington, Vt., on June 26-29.

Chief William C. Shepard, of Pittsfield, Mass., president; Chief John W. O'Hearn, of Watertown, Mass., secretary-treasurer; Chief James M. Casey, of Cambridge, Mass.; George F. Cobb, traffic manager; and Harry Belknap, press representative, attended.

The following committee was appointed to draw up memorial resolutions upon the death of Chief William F. Daley, of Brockton: Chief Selden R. Allen, Brookline, Mass., chairman; Chief John M. Evans, New Orleans, La.; and Chief James M. Casey, Cambridge, Mass.

The Program

The following is the program of the convention:

Tuesday, June 26—9 a. m.

Opening of Convention by President William C. Shepard. Invocation. Introductory Address by President Shepard. Address of Welcome by His Excellency John E. Weeks, Governor of Vermont. Selection by Orchestra. Address of Welcome by Hon. Clarence H. Beecher, Mayor of the City of Burlington. Selection by Orchestra.

Response to Addresses of Welcome by Chief Selden R. Allen, of Brookline, Mass. Memorial Exercises. Selection by Quartet. Roll Call of Deceased Members. Taps. Selection by Orchestra. Memorial Address. Selection by Quartet. Benediction. Adjournment of Session.

Afternoon—Visits to Exhibits

Auto trip for ladies starting at 2 p. m.

Evening Session

Address by Chief J. N. Sullivan, Utica, N. Y.

Address by Mr. George Ernest Robinson, Architect, 80 Federal St., Boston, Mass., on "The Development, Location, and Construction of Fire Houses in New England." (Illustrated.)

Address by Assistant Chief E. W. Williams, Lynn, Mass., on "European Fire Departments" (Illustrated.)

Wednesday, June 27—Morning Session

Address by Assistant Chief Thomas F. Dougherty, New York.

Address by Honorable Daniel F. Carmody, Ex-Chief, Fair Haven, Vt.

Address by P. C. Charnock, Engineer, New England Insurance Exchange.

Afternoon Session

Address by Ex-Chief F. A. Murray, Morris Cove, Conn., on "The Importance of Drill Schools and Fire Colleges."

Address by Chief Arthur W. Spring, Laconia, N. H., on "The Fire Hazard and Protection of Lake Regions."

Address by Ex-Chief Peter E. Walsh, Boston, Mass., "The Importance of Organized Fire Prevention."

Address by Chief Jeremiah F. Sullivan, Fall River, Mass., "The Chief's Story of the Fall River Fire."

Evening

Banquet. Round Table Discussion.

Thursday, June 28

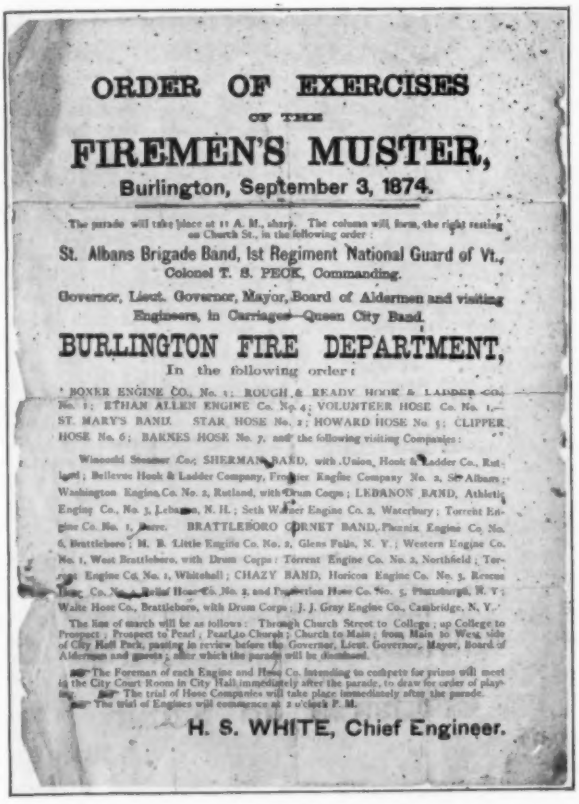
All Day Boat Trip on Lake Champlain.

Friday, June 29—Morning Session

Reports of Officers. Reports of Committees. Unfinished Business. New Business. Election of Officers. Selection of City for Next Convention. Adjournment.

Meetings and Exhibits to be held in the New Memorial Auditorium. Convention headquarters at Hotel Vermont.

(*For list of Exhibitors see page* 516)



ORDER OF EXERCISES
OF THE
FIREMEN'S MUSTER,
Burlington, September 3, 1874.

The parade will take place at 11 A. M., sharp. The column will form, the right resting on Church St., in the following order:

St. Albans Brigade Band, 1st Regiment National Guard of Vt.,
Colonel T. S. PECK, Commanding.

Governor, Lieut. Governor, Mayor, Board of Aldermen and visiting Engineers, in Carriages—Queen City Band.

BURLINGTON FIRE DEPARTMENT,
In the following order:

BOXER ENGINE CO., No. 1; ROUGH & READY HOOK & LADDER CO., No. 1; ETHAN ALLEN ENGINE Co. No. 4; VOLUNTEER HOSE Co. No. 1,—ST. MARY'S BAND. STAR HOSE No. 2; HOWARD HOSE No. 5; CLIPPER HOSE No. 6; BARNES HOSE No. 7, and the following visiting Companies:

Winooski Steamer Co; SHERMAN BAND, with Union, Hook & Ladder Co., Rutland; Bellevue Hook & Ladder Company, Frontier Engine Company No. 2, St. Albans; Washington Engine Co. No. 2, Rutland, with Drum Corps; LEBANON BAND, Athletic Engine Co., No. 3, Lebanon, N. H.; Seth Warner Engine Co. 2, Waterbury; Torrent Engine Co. No. 1, Barre. BRATTLEBORO CORNET BAND, Phœnix Engine Co. No. 6, Brattleboro; M. B. Little Engine Co. No. 2, Glens Falls, N. Y.; Western Engine Co. No. 1, West Brattleboro, with Drum Corps: Torrent Engine Co. No. 2, Northfield; Torrent Engine Co. No. 1, Whitehall; CHAZY BAND, Horicon Engine Co. No. 3, Rescue Hose Co. No. 1, Relief Hose Co. No. 2, and Protection Hose Co. No. 5, Plattsburgh, N. Y.; Waite Hose Co., Brattleboro, with Drum Corps; J. J. Gray Engine Co., Cambridge, N. Y.

The line of march will be as follows: Through Church Street to College; up College to Prospect; Prospect to Pearl; Pearl to Church; Church to Main; from Main to West side of City Hall Park, passing in review before the Governor, Lieut. Governor, Mayor, Board of Aldermen and guests; after which the parade will be dismissed.

☞ The Foreman of each Engine and Hose Co. intending to compete for prizes will meet in the City Court Room in City Hall immediately after the parade, to draw for order of playing. ☞ The trial of Hose Companies will take place immediately after the parade. ☞ The trial of Engines will commence at 2 o'clock P. M.

H. S. WHITE, Chief Engineer.

The Order of Exercises for a Fireman's Muster, Held at Burlington, Vt., on September 3, 1874

Reproduced from the original circular, 7¼ by 10¼ inches, in the possession of Chief C. D. Stockwell.

Stuttgart, Ark., to Issue Fire Bonds—Stuttgart, Ark., will issue $12,000 fire equipment bonds.

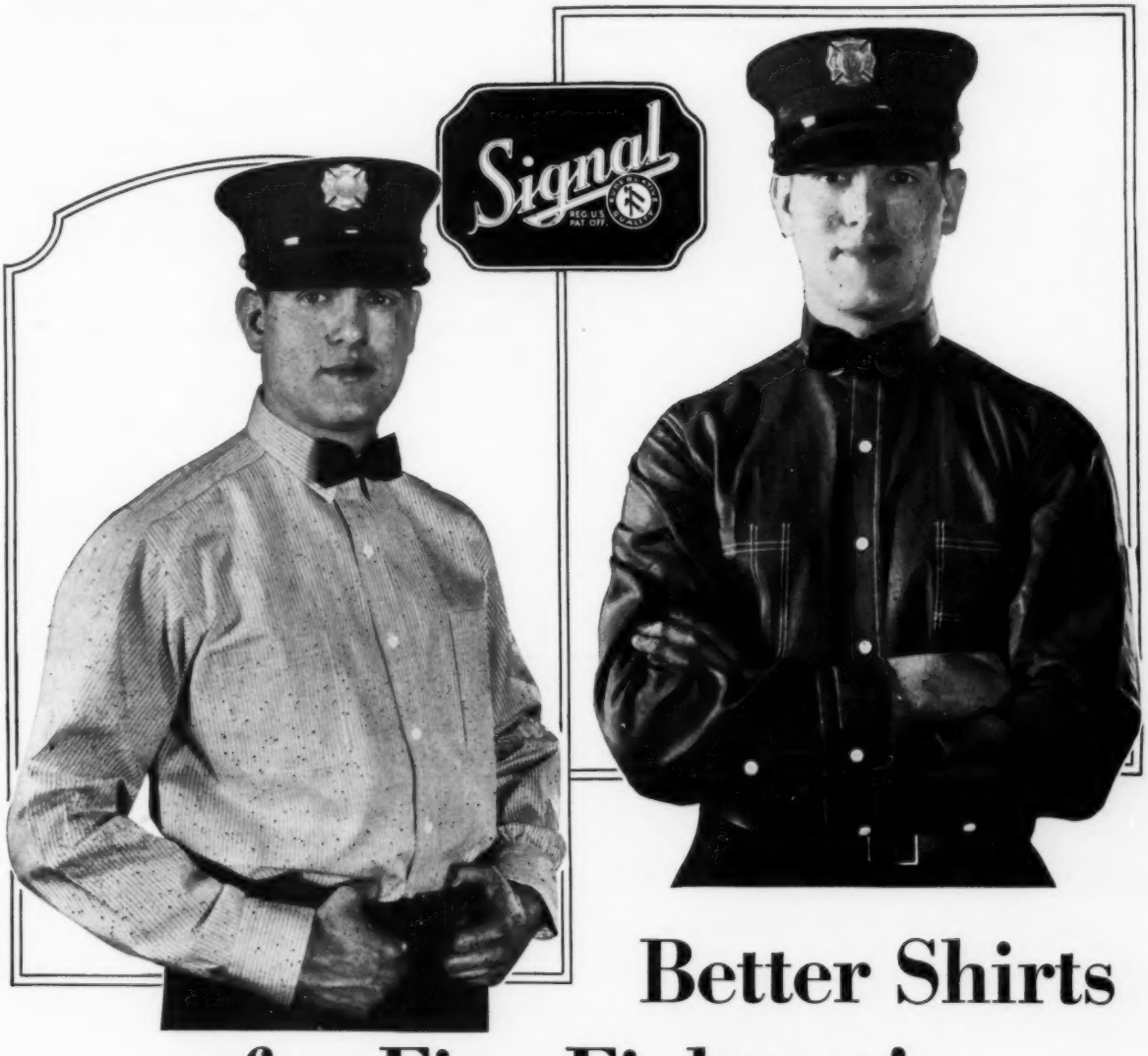
Corte Madera, Cal., May Issue Bonds—Corte Madera, Cal., is considering an issue of $10,000 for the erection of a fire house and an additional $10,000 for the purchase of fire apparatus.

Wenatchee, to Vote on Fire Bonds—Some time in November, Wenatchee, Wash., may vote on an issue of $55,000 bonds for fire apparatus and a fire house.

Freeport, N. Y., to Purchase Pumper—Freeport, L. I., N. Y., is considering the purchase of a 1,000-gallon pumper and a hose wagon. The village board has appropriated $20,000 for the purchase and bonds will be invited at an early date.

Two Views of a Fireman's Parade Held at Burlington, Vt., on August 11, 1910

From old post cards in the possession of Chief C. D. Stockwell. The picture on the right shows the Boxer Engine Co., organized February 24, 1830.



Better Shirts for Fire Fighters!

FOR dressy uniformity and economy make a Signal part of your uniform. There is no better shirt for firemen than the Signal Two Collar style with either soft or laundered detachable collars to match. When one collar becomes soiled, you simply change to the other. Fewer washings are required; the shirt gives double wear and service; you save money.

There are Signals with collars attached too; no matter what style or pattern is selected, we promise to improve the appearance of your department and give you the fullest measure of shirt satisfaction. Write for samples of the ten TubTest patterns.

To Fire Chiefs

A Signal has been selected as the regulation uniform shirt in Chicago, Cleveland, Minneapolis, St. Paul, Indianapolis, Columbus, Toledo, and in other large cities. Write us to submit our complete plan for dressy uniformity. No obligation.

SIGNAL SHIRT CO.
RACINE, WISCONSIN

WHY SMALL CITY DEPARTMENTS SHOULD PERFORM SALVAGE WORK

As Much Work of Fire Department as Prevention and Extinguishment—Some Things to be Considered in Adopting Salvage Work

By JAMES O'DONNELL,
Chief, Insurance Patrol, St. Louis, Mo.*

FOR many years there has been debated throughout the country the question of the responsibility of a city fire department regarding the work of property salvage. Many chiefs maintained, and still do, that this work is a function of the insurance companies, and has no place in fire department activities—holding the firemen's work should be confined to fire extinguishment. This I believe is not true.

The duty of the fire department is to serve the city to which it belongs to the best of its ability, in the protection of life and property, and, looking at it from this angle, no department is fulfilling its trust to the citizens and business interests unless some form of salvage work is rendered.

Assuming this to be a fact, let us consider what should be done to obtain the greatest amount of salvage efficiency with the means usually at your disposal.

Some Important Considerations

It is evident that consideration must be given to the following: Funds available; the number of men that can be assigned to salvage operations; transportation of equipment; hazards involved and the facilities for training.

It may be safely stated that no small department is provided with funds exceeding its current needs and from this it can be seen that what must be accomplished must be performed by such apparatus and men as can be diverted to this work by doubling up on the company fire duty and with equipment purchased with the saving made on money appropriated for the other branches of the department.

It is accepted that the greatest amount of damage results from the excessive use of water, and in correcting this an amazing saving in the fire loss would develop. It is said that the ordinary fire—especially the small store fires—could be successfully handled with small lines backed up by large streams if necessary. The advantage of the small lines are several:

First—the amount of water used, the speed that can be attained in the handling of the line of this size, and, third, the possibility of releasing men for salvage work.

Salvage Equipment for Truck Companies

The next step would be to equip the truck companies with covers of a standard size and weight but made of waterproof material, squegees, brooms, shovels and the like for handling water and protecting contents. There should also be added some heavy duck covers, a roll of roofing paper, nails, etc., for covering roofs and windows, to protect the buildings and contents from the elements.

As to the number of men necessary for efficient work, it must be remembered that the work should be accomplished by men covering in pairs, as this is the way the greatest number of covers can be spread. Not less than two men should be provided, and as many more as the strength of the department will permit.

To sum up, the work of salvage is one of the basic operations of the fire department and one that should receive equal consideration with fire prevention and fire extinguishment. It is believed that the adoption of salvage work as a part of the duties of the department is a step in the direction of greater efficiency.

Money spent in salvage equipment is well spent and I feel that in providing for this service a step forward will have been taken.

The cost of salvage equipment is not prohibitive, the outlay consisting of a few covers and tools for the protection of property of your citizens.

* From a paper read before the meeting of the Egyptian Fire Fighters' Association held at Belleville, Ill.

Sherburne, N. Y., Buys Pumper—Sherburne, N. Y., has purchased a 600-gallon Sanford pumper for $6,000. Delivery is promised about July 1.

Glenwood, N. Y., to Erect New Fire Station—A new fire headquarters will be erected in Glenwood, L. I., N. Y., at an estimated cost of $45,000.

Exhibitors at the New England Convention

The following is a list of those concerns which will have exhibits at the New England Fire Chiefs' convention. The Chairman of the Exhibition Committee is Frank M. Tiffany.

American-LaFrance and Foamite Corp.
Eureka Fire Hose Mfg. Co.
American Fomon Company.
W. S. Nott Company.
The Gamewell Company.
The H. K. Barnes Company.
Fabric Fire Hose Company.
Holtzer-Cabot Electric Company.
American Fire Appliance Company.
The Seagrave Corporation.
The Kilsoot Chemical Company.
H. B. Smith Company.
Pyrene Manufacturing Company.
American Mine Safety Appliance Company.
Boston Woven Hose and Rubber Company.
Maxim Motor Company.
Ahrens-Fox Fire Engine Company.
Mack Truck Company.
Samuel Eastman Company.
C. G. Braxmar Company.
H. R. Packard & Son.
Haskell Portable Crank Case Company.

Eleven Indicted in Insurance Fraud

Eleven men, some holding prominent positions, were indicted following the fire in the Mario and Michael Mirabellis clothing establishment in Elizabeth, N. J., on February 28. The two members of the firm had made a complete confession. They aided the government in uncovering all details of the alleged plot.

After the fire all goods in the Mirabellis place were damaged by water. Among these goods was a large amount of cloth and clothing belonging to the Government. Lieutenant Kiraner had been assigned to inspect these goods. It was charged that the "wetting down" was done by members of the fire adjuster firm. This concern was paid $5,000 for their part in the conspiracy. The lieutenant received $1,500 as a bribe for his work in claiming that the Government merchandise was practically worthless after the fire.

The indictment names more than fifty insurance companies in this country and in France and England which would have been victimized if the alleged scheme had been successful.

New Trade Literature Received

The following literature descriptive of up-to-date methods and equipment for fire departments, has just been issued for general distribution, and can be procured by writing to the concern mentioned. Those desiring additional trade literature in which they are interested can use our regular "Information for Buyers" page, listed in the Advertising Index.

Woodhouse Manufacturing Co., New York—Catalogue describing the New Erick Fire Siren for volunteer fire departments; illustrations of the equipment in color.

Schlangern Bros. Co., Chicago, Ill.—"Hose Fittings Catalog No. 9," which describes the company's line of hose couplings, hose connections and standpipes and other brass articles. The catalogue contains forty-six pages and is illustrated in color.

American-LaFrance & Foamite Corp., Utica, N. Y.—"Modern Fire Fighting Methods," a sixteen page illustrated booklet on chemical extinguishers and the Foamite foam generators. "Woeful Waste," a sixteen page illustrated booklet describing the Foamite system used in extinguishing oil fires. Includes a perspective view of an oil field showing the piping and equipment necessary to properly protect such risks against the spread of fire.

Reports Received

Bureau of Safety, Panama—Annual report of the Bureau of Safety, Republic of Panama, printed both in Spanish and English; forty-two pages and cover.

Board of Fire-Masters, Charleston, S. C.—Annual report of the Board of Fire-Masters of Charleston, S. C., twenty-six pages with tables and cover.

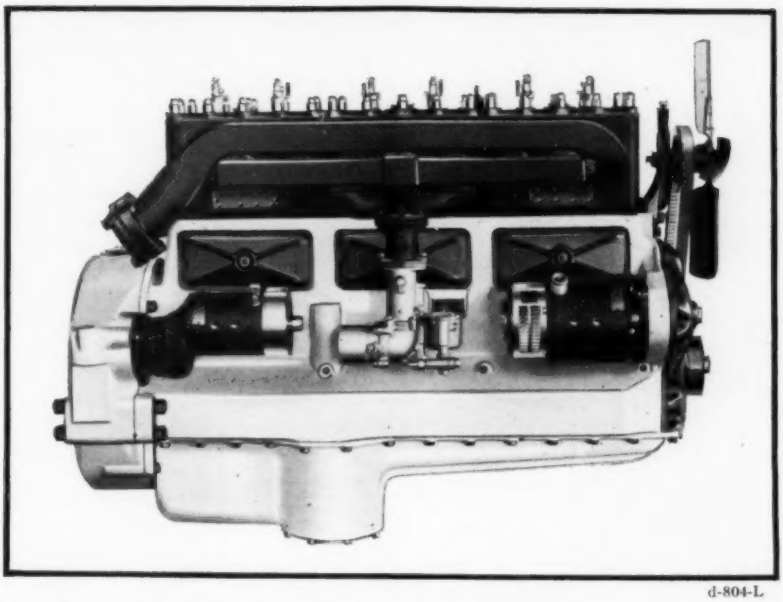
Railway Fire Protection Association—News Letter No. 30 of the Railway Fire Protection Association describing various types of fires and fire hazards; sixty-three pages.

Department of Labor, Pennsylvania—Labor and Industry, published by the Department of Labor and Industry of the Commonwealth of Pennsylvania.

Cleveland Wants More Fire Equipment—Cleveland, Ohio is working for the purchase of new apparatus to cost $300,000.

Claymont, Del., May Buy Apparatus—Claymont, Del., is considering the purchase of new fire apparatus.

Eyota, Minn., to Buy Apparatus—Eyota, Minn., in connection with the farmers in the immediate section, will purchase fire apparatus for rural protection.



d-804-L

Waukesha 120 *H. P. Fire Pumper Engine Used in Milwaukee*

Doodads and Gadgets

In the days of "Get a horse" anything could, and usually did, happen to the "Benzine Buggy" engine. Doodads and gadgets galore were draped and festooned all over it—compulsory accessibility—all easy to reach when they broke. But how styles have changed in pumper engines!

Take a good look at the 1928 *Heavy-Duty Waukesha Fire Pumper engine with the genuine "Ricardo Head" shown above, and notice carefully the perfect protection of all working parts. This feature and positive filtered oil lubrication, triple strength crankshaft, "girder type" crankcase, "truncated" cylinders all contribute to the unusual stamina in continuous pumping which makes these engines famous. Write for "Fire Pumper Engine Bulletin."*

D-852-L

FIRE EQUIPMENT DIVISION

WAUKESHA MOTOR COMPANY

Waukesha 956 St. Paul Ave. **Wisconsin**

Eastern Sales Office *Eight W. 40th Street* *New York City*

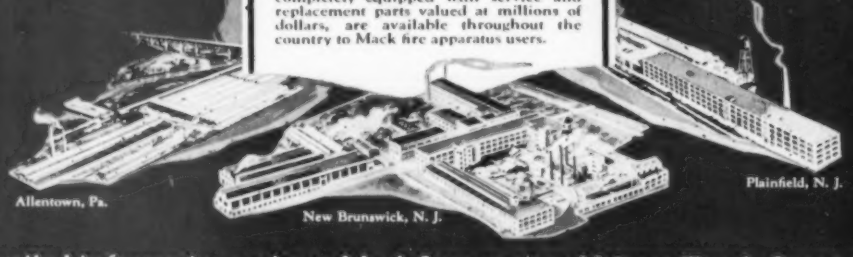
REG. U.S. PAT. OFF.

Mack BUILT

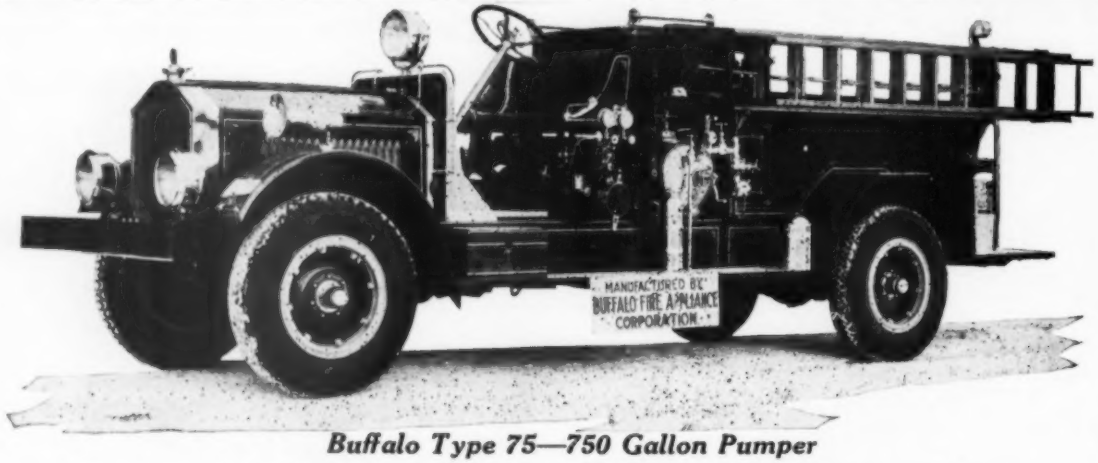
Means Progressive Fire Engineering

MACK SERVICE MEANS DIRECT FACTORY BRANCH SERVICE

More than one hundred Mack branches having a combined floor area of 70 acres, completely equipped with service and replacement parts valued at millions of dollars, are available throughout the country to Mack fire apparatus users.



For detailed information write to Mack-International Motor Truck Corporation, Fire Engine Division, 25 Broadway, New York City



Buffalo Type 75—750 Gallon Pumper

The above 750 Gallon Triple Combination Chemical and Hose Car is in service at the United States Veterans' Hospital which is located at Northport, L. I., and is safeguarding the lives of many of our boys who served in the World War against the world's greatest hazard, which is FIRE.

IF YOU WANT SOMETHING BETTER, BUY *"BUFFALO"*
U. S. GOVERNMENT BUYS THE BEST, WHY DON'T YOU?

Write for detailed specifications

BUFFALO FIRE APPLIANCE CORP.

44 CENTRAL AVE. BUFFALO, N. Y.

Manufacturers of all types of Fire Apparatus

CONVENTION DATES

June 16—LEBANON COUNTY FIREMEN'S ASSOCIATION. Annual Convention, Palmyra, Pa. Secretary, William I. Kutz, Box 233, Myerstown, Pa.

June 19-21—HUDSON VALLEY VOLUNTEER FIREMEN'S ASSOCIATION. 39th Annual Convention, Kingston, N. Y. Secretary, Chief Chris W. Noll, Poughkeepsie, N. Y., Fire Department.

June 19-22—ANNUAL SHORT COURSE OF FIRE PREVENTION, CONTROL AND EXTINGUISHMENT. 4th Course, University of Illinois, Champaign-Urbana, Ill. Secretary, Ill. Firemen's Association, Asst. Chief Roy W. Alsip, Champaign, Ill.

June 20—NASSAU COUNTY FIREMEN'S ASSOCIATION. Annual Tournament, Port Washington, N. Y.

June 20-22—WISCONSIN STATE FIREMEN'S ASSOCIATION. 41st Annual Convention and Tournament, Kiel, Wis. Secretary, E. Philip Mueller, Jefferson, Wis.

June 23—EAST WISCONSIN FIREMEN'S ASSOCIATION. Annual Convention, Kiel, Wis.

June 20-23—PROVINCIAL FEDERATION OF ONTARIO FIRE FIGHTERS. Annual Convention, King Edward Hotel, Toronto, Ont., Can. Secretary-Treasurer, David H. Lamb, 132 Bellevue Avenue (2) Toronto.

June 25—NORTHWEST FIREMEN'S ASSOCIATION. Semi-Annual Convention. Centerton, Ark. Secretary-Treasurer, F. M. Brock, Bentonville, Ark.

June 25-28—OKLAHOMA STATE FIREMEN'S ASSOCIATION. 34th Annual Convention and State Firemen's Training School, Blackwell, Okla. Secretary, Charles Slemp, 820 East 19th St., Oklahoma City.

June 26-29—NEW ENGLAND ASSOCIATION OF FIRE CHIEFS. 6th Annual Convention, Burlington, Vt. Secretary-Treasurer, Chief John W. O'Hearn, Watertown, Mass. Chairman, Exhibit Committee, Frank M. Tiffany, Gamewell Company, 1022 Commonwealth Avenue, Boston.

June 28-30—ALLEGHANY COUNTY FIREMEN'S ASSOCIATION. Annual Convention, Tarentum, Pa.

July 3—MAPLE VALLEY FIREMEN'S ASSOCIATION. Tournament, Battle Creek, Ia.

July 4-6—DOMINION ASSOCIATION OF FIRE CHIEFS. 20th Annual Convention, Kingston, Ont. Secretary, Chief James Armstrong, Kingston.

July 5-7—SOUTHEASTERN FIRE CHIEFS' ASSOCIATION. Annual Convention, Atlanta, Ga. Secretary, Chief H. E. Whitener, Hickory, N. C.

July 10-12—MICHIGAN STATE FIREMEN'S ASSOCIATION. 54th Annual Convention, Port Huron, Mich. Secretary, H. L. Williams, Ludington, Mich.

July 11—DELAWARE VOLUNTEER FIREMEN'S ASSOCIATION. 8th Annual Convention, Hall of Carlisle Fire Company, Milford, Del. Secretary, Sam H. Carson, Dover, Del.

July 17-19—INDIANA FIREMEN'S ASSOCIATION and NO. IND. INDUST. & VOL. FIREMEN'S ASSO. Annual Convention, Terre Haute, Ind. Secretary Ind. F. Asso., Frank H. Miller, Fire Headquarters, Terre Haute.

July 18-21—SOMERSET COUNTY FIREMEN'S ASSOCIATION. Annual Convention, Boswell, Pa. Secretary, J. R. Shanks, Rockwood, Pa.

July 26-28—MONTANA STATE FIREMEN'S ASSOCIATION. 37th Annual Convention, Livingston, Mont. Secretary, D. E. Moser, Bozeman, Mont.

July 27-28—NEW MEXICO STATE FIRE CHIEFS' ASSOCIATION. Annual Convention, Socorro, N. M. Secretary, Theodore A. Rosenwald, East Las Vegas, N. M.

Aug. 1-2—CENTRAL DISTRICT VOLUNTEER FIREMEN'S ASSOCIATION. Annual Convention, Clearfield, Pa. Secretary, John E. Johnson, DuBois, Pa.

Aug. 6-8—UTAH STATE FIREMEN'S ASSOCIATION. 21st Annual Convention, Bingham Canyon, Utah. (Date to be set at April meeting.) Secretary, Harris E. Anderson, Fire Headquarters, Salt Lake City, Utah.

Aug. 14—CUMBERLAND VALLEY VOLUNTEER FIREMEN'S ASSOCIATION. 27th Annual Convention, Hanover, Pa. Secretary, C. L. Jacobs, Waynesboro, Pa.

Aug. 14-16—CONNECTICUT STATE FIREMEN'S ASSOCIATION. 44th Annual Convention, Dorscht Hall, 270 Crown St., New Haven, Conn. Secretary, D. W. Harford, South Norwalk, Conn.

Aug. 14-16—WISCONSIN PAID FIREMEN'S ASSOCIATION. 21st Annual Convention, Racine, Wis. Secretary, Hugh Corcoran, Superior, Wis.

Aug. 22-24—VIRGINIA STATE FIREMEN'S ASSOCIATION. 42nd Annual Convention, Ocean View, Va. Secretary, Chief J. B. Gordon, Newport News, Va.

Aug. 28—MICHIGAN STATE FIRE CHIEFS' ASSOCIATION. Annual Convention, Fordson, Mich. Secretary, George F. Dansbury, Grosse Pointe Farms, Mich.

Aug. 29-31—CALIFORNIA STATE FIREMEN'S ASSOCIATION. 6th Annual Convention, Reading, Cal. Secretary-Treasurer, H. E. Strasser, 1171 Tenth Street, San Diego, Cal.

Aug. 29-31—INDIANA FIRE CHIEFS' ASSOCIATION. Annual Convention, Fort Wayne, Ind. Secretary, Chief Ezra D. Owens, Fire Department, Bedford, Ind.

Sept. 5-6—COLORADO STATE FIREMEN'S ASSOCIATION. 12th Annual Convention and Tournament, Rocky Ford, Col. Secretary, Clinton Turnbull, 303 Jacobson Bldg., Denver, Col.

Sept. 11-13—ILLINOIS FIREMEN'S ASSOCIATION. 41st Annual Convention, LaSalle, Ill. Secretary, Roy W. Alsip, Asst. Chief, Fire Department, Champaign, Ill.

Sept. 18-19—IOWA FIREMEN'S ASSOCIATION. 51st Annual Convention, Independence, Ia. Secretary, E. E. Parsons, Marion, Ia.

Oct. 1-5—PENNSYLVANIA STATE FIREMEN'S ASSOCIATION. 49th Annual Convention, Uniontown, Pa. Secretary, Charles F. Clark, 411 Bellevue Avenue, Wayne, Pa.

Oct. 1-6—PACIFIC COAST ASSOCIATION OF FIRE CHIEFS. 35th Annual Convention and School of Instruction for Firemen, Sacramento, Cal. Secretary, State Fire Marshal Jay C. Stevens, Merchants' Exchange Bldg., San Francisco, Cal.

Oct. 9-10—MISSOURI VALLEY ASSOCIATION OF FIRE CHIEFS. Annual Convention (tentative date). Secretary, Chief Ray Tiller, Waterloo, Ia.

Oct. 9-11—RAILWAY FIRE PROTECTION ASSOCIATION. Annual meeting, place to be selected later by Executive Committee. Secretary-Treasurer, R. R. Hackett, Baltimore & Ohio R. R., Baltimore, Md.

Oct. 11-12—GREAT LAKES ASSOCIATION OF FIRE CHIEFS. Annual Convention (tentative date). Secretary, Chief Frank C. McAuliffe, Chief of Patrols, 100 S. Desplaines St., Chicago, Ill.

Oct. 15-17—EASTERN ASSOCIATION OF FIRE CHIEFS (Eastern Division, I. A. F. C.) First Annual Convention, Bellevue-Stratford Hotel, Philadelphia, Pa. (Just preceding I. A. F. C. Convention.) Secretary, T. Howell Johnson, Newark, N. J.

Oct. 17-20—INTERNATIONAL ASSOCIATION OF FIRE CHIEFS. 55th Annual Convention, Bellevue-Stratford Hotel, Philadelphia, Pa. Exhibits at Second Regiment Armory. Secretary, Chief James J. Mulcahey, Yonkers, N. Y.; Executive Secretary, Jay W. Stevens, Merchants' Exchange Bldg., San Francisco, Cal.; Chairman, Exhibits, Chief August Gerstung, Elizabeth, N. J.

Oct. 22-24—KANSAS STATE FIRE CHIEFS and FIREMEN'S ASSOCIATIONS and WOMEN'S AUXILIARY. 13th and 42nd Annual Conventions and 3d Meeting, respectively, Liberal, Kan. Secretary, Chief K. D. Doyle, Wamego, Kan.

Chief Louis Behrens Re-elected President

The South Carolina Firemen's Association closed their twenty-third annual convention at Rock Hill, S. C., May 31, after a busy session of two days. All the old officials, except the second vice president, were re-elected.

Officers for the ensuing year are as follows:

President—Louis Behrens, Charleston.
First Vice President—A. McMarsh, Columbia.
Second Vice President—H. Leland Law, Hartsville.
Treasurer—T. O. Flowers, Rock Hill.
Statistician—R. T. Hall, Orangeburg.
Chaplain—Rev. W. P. Peyton, Rock Hill.

Myrtle Beach, Spartanburg and Columbia made bids for the convention in 1929, the latter city being chosen by the delegates.

During the morning session the delegates presented a set of china to their chaplain, Rev. W. P. Peyton, in appreciation of the interest he has taken in the state association.

Management and morale of volunteer fire departments, quality and worth of the several varieties of fire hose, and activities of the underwriters association, were some of the subjects drawing considerable discussion from the visiting delegates.

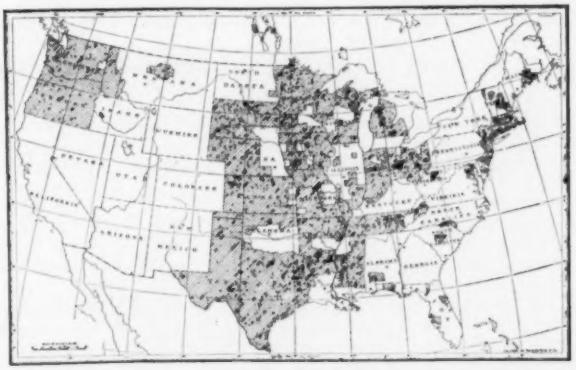
Wednesday afternoon was devoted to the social features of the convention and the visitors were entertained by the local committee, and the college authorities. A picnic dinner was served by the ladies of the United Daughters of the Confederacy at Confederate Park. Theater parties and street dancing were features of interest following the dinner hour.

With 200 delegates present, the convention opened in the city auditorium in Rock Hill, Wednesday morning, May 30. Insurance Commissioner Sam B. King was the principal speaker at Wednesday morning's session. He advocated standard equipment for each town and city, so that equipment summoned from neighboring towns might be of assistance in an emergency.

He also urged that firemen insist upon insurance protection by State legislation, in order that families of firemen killed in line of duty would be cared for. He pledged his support to such a movement.

After a business session the 200 or more delegates and visitors took part in a parade, visited Winthrop College and attended a banquet and a street dance.

A baseball game between two crack teams, one from the South Carolinians and the other from the Charlotte (N. C.) fire departments provided the post-convention entertainment for the fire laddies before departing for their homes.



Hose Standardization Work Has Made Steady Progress

Thirty of the forty-eight states in the Union are now engaged or have been actively engaged in rechasing hose threads to conform to National standard dimensions. Several of these states have passed laws making it a misdemeanor to use other than standard threads while other states have encouraged the adoption of these standards through various insurance companies and associations. It has been pointed out that if the activity in this work is as successful in the future as it has been the past eight years, the remaining virgin territory will be fairly well standardized within the next five years.

FIRE DEPARTMENT ACTIVITIES

Camden Awaits New Fire Apparatus—Camden, N. Y., is awaiting delivery of its new apparatus.

Jamestown, Pa., to Install Boxes—Bids have been invited on the installation of sixty fire alarm boxes in Jamestown, Pa.

Newburyport, Mass., to Purchase Equipment—Newburyport, Mass., has voted $51,000 for the purchase of fire equipment.

Big Prairie, O., May Buy Apparatus—Big Prairie, Ohio, is considering the purchase of fire apparatus.

Quakertown, Pa., to Buy Pumper—Quakertown, Pa., has appropriated $10,500 for the purchase of a pumper.

Cuba, N. Y., Votes for Fire Apparatus—Cuba, N. Y., has voted to purchase a pumper for $5,500.

Hamilton, N. Y., to Buy Maxim Pumper—Trustees of Hamilton, N. Y., voted to buy a 600-gallon Maxim pumper.

Syracuse, N. Y., Orders New Apparatus—Syracuse, N. Y., has ordered two Seagrave 1,000-gallon pumpers and an 85-foot Seagrave ladder. Their bid was $39,875.

Chief of Huntington Park, Cal., Dead—Scott Resley, chief of Huntington Park, Cal., died while on the way to the hospital. He had been sick only two days with pneumonia.

Weehawken, N. J., Buys Pumper—Weehawken Township, N. J., has purchased a Maxim 750-gallon pumper. This model has four-wheel brakes.

New Britain Awards Fire House Contract—New Britain has awarded the contract for the construction of its new fire house.

Owasso, Mich., Firemen Ask for Pay Increase—Firemen of Owasso, Mich., have petitioned for an increase of fifteen dollars a month.

Brown Made Assistant Chief of Des Moines—J. H. Brown has been appointed first assistant chief of Des Moines, Ia., fire department.

Company Organized in Altoona, Ia.—A volunteer fire company has been organized in Altoona, Ia. S. W. Champion was elected chief.

E. Wisconsin Firemen to Meet in Kiel—The East Wisconsin Firemen's Association will meet in Kiel, Wis., on June 23. The state firemen's association will meet there June 20-22.

Appleton, Wis., Orders Pumper—Appleton, Wis., has ordered a 1,000-gallon Seagrave pumper for $12,000. Delivery will be made within sixty days.

Firemen Injured in Quincy, Mass., Crash—Four firemen were injured when a company collided with a motor car in Quincy, Mass.

Everett, Mass., to Have New Fire Alarm—The Board of Aldermen of Everett, Mass., voted to spend $100,000 for a new fire alarm system.

Long Beach, Cal., Buys Small Apparatus—A light truck has been purchased for Long Beach, Cal., on which will be mounted a body constructed in the fire department shops. The apparatus will be used for fighting grass fires.

N. Y. Surgeon Lectures in Boston—Dr. Daniel J. Donovan, chief surgeon of the New York Police Department, gave an illustrated lecture at fire alarm headquarters, Boston, Mass., on resuscitation of persons overcome by gas or electric shock.

Another Station Wanted in Great Falls—Chief A. J. Trodick of Great Falls, Mont.,, has asked that another firestation be constructed and ten more men be appointed to the department to meet the growing conditions in the city.

Quincy, Ill., Wants New Chemical Car—Chief Yates of Quincy, Ill., has recommended the purchase of a chemical car equipped with four chemical tanks with a total capacity of 250 gallons, and the installation of a fire alarm switchboard.

Milwaukee Has New Bungalow Station—A new bungalow fire station has been opened in Milwaukee, Wis. It houses a four-wheel drive engine equipped with a 750-gallon pump. The station costs $30,000.

Changes Made in Des Moines Examinations—All candidates for the Des Moines Fire Department must first pass a physical examination. In the past, they first submitted to a written examination and then were examined by a doctor.

Henry Ford Presented with Old Fire Apparatus—Chester, Pa., has presented Henry Ford with an old pumper, a relic of the days when firemen wore red shirts and suspenders. The gift was made by a local merchant.

Ex-Firemen Threaten to Form Own Department—Twenty-one firemen of North Wales, Pa., including the chief, who resigned following a dispute over the purchase of fire apparatus have stated that they would form their own fire department.

Western Penna., Firemen Raising Funds—Funds are being raised in Riversdale, Pa., to pay convention expenses of the coming gathering of the Western Pennsylvania Firemen's Association.

Lenawee County, Mich., Has Farm Protection—Sponsored by the local Grange, a movement has been organized to give fire protection to farmers of Lenawee County, Mich. Non-members must pay for use of fire apparatus.

Haverhill to Have Firemen's Convention—The Massachusetts Permanent Firemen's Association will hold its annual convention in Haverhill on September 18–20. Meetings will be held in the City Hall.

Pelham, N. Y., Wants Paid Department—A movement has started to establish a paid fire department in Pelham, N. Y. The volunteers are working to retain the present organization which has been instrumental in keeping the fire losses very low.

Wants Seattle to Raise Age Limit—The United Veterans' Political League is urging Seattle, Wash., to return to the thirty-five year age limit for admission to the fire department in place of the present thirty-year practice.

Samuel Eastman Has New Plant—Several weeks ago, fire destroyed the factory of the Samuel Eastman Company at Concord, N. H. Since then the company has equipped a new plant and is ready to supply all orders received.

Galesburg, Ill., to Enforce Oil Law—Chief John Cater of Galesburg, Ill., in cooperation with a deputy fire marshal, is enforcing the law that no business place shall be permitted to keep more than five gallons of gasoline unless stored in an underground tank.

Plans Made for Firemen's Memorial Day—Committees have been appointed to have charge of Firemen's Memorial Day in Boston, Mass., which comes some time in June. There will be the customary parade and exercises will be held in the Forest Hills Cemetery.

Fire Engine Chasers Are Trapped—Many in Medina, Ohio, received summonses for chasing fire apparatus. A brush fire was made and apparatus rushed to the blaze in order to decoy automobilists. Many who made a habit of chasing apparatus were thus trapped and taught a lesson.

Cumberland Valley Firemen to Meet—The annual convention of the Cumberland Valley Volunteer Firemen's Association will be held in Hanover, Pa., on August 14. There will be no parade or demonstrations as there have been in the past. The association has member companies in Maryland, Pennsylvania, Virginia and West Virginia.

Ex-Chief of Kearny, N. J., Buried—Funeral services were held for Edmund Bell, for five years chief of Kearny, N. J., fire department and a former drummer boy in the Civil War. He was eighty-three years old. In 1916 he was presented with a gold medal in honor of his twenty-five years service in the department.

Hedden Vetoes Temporary Officer Plan—Commissioner George Hedden of Buffalo, N. Y., has vetoed plans to assign fifty-three lieutenants to temporary rank of captains but with the salary of lieutenants. He said that he disapproves of any plan that would not give a fireman the salary for the rank that he holds. The men offered to carry on in the superior rank for a year until such time as they would get paid for the higher rank work done.

N. Wales, Pa., Troubled by Vandals—A reward has been offered for the arrest of vandals who have been hindering fire department operations. Firemen found their rubber boots filled with glass, threads on the nozzle damaged and a can of talcum powder placed in the suction line to prevent the flow of water. The town is expecting delivery soon of a new Hahn pumper costing $8,000.

Question on Clothing Allowance—Formerly firemen in Burlington, Ia., received such small salaries that little was left to purchase uniforms. Since then the council has allowed each man $120 a year as a fire department uniform allowance. A movement has started to give the men the $120 yearly allowance with their pay and have them buy their own uniforms. Some members of the council fear that this will result in a motely array of uniforms.

WHY Send a Big Truck *to a Small Fire?*

THE Indian Fire Patrol is a fast sturdy unit which can respond to grass, chimney, trolley, auto, and other fires of minor intensity.

Indian FIRE PATROL

HERE is an excerpt from a Charleston, South Carolina, newspaper—

"Chief Louis Behrens of the fire department estimates that the speed, economy, and convenience of the motorcycle apparatus has saved the city thousands of dollars not only in economy of operation and prevention of heavy loss from fire by quick action, but also in the ease with which they get around town without stopping traffic."

Let us send complete descriptive literature and data on costs.

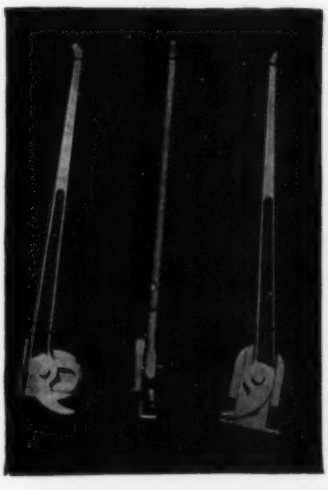
Indian Motocycle Company

SPRINGFIELD, MASS., U. S. A.

When seconds count . . . and lives are at stake . . .

THE P & Q DOOR OPENER

gets your men inside!

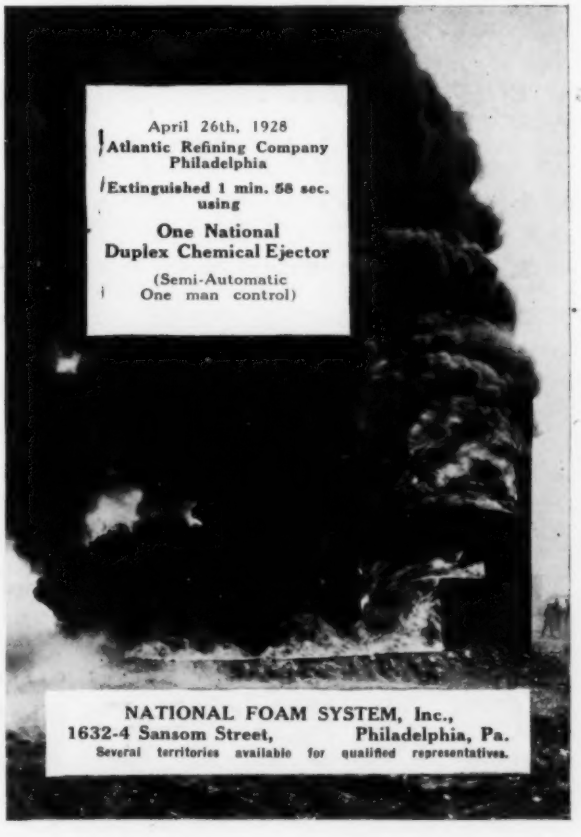


We will gladly supply full information, and submit one on memorandum for inspection and thirty days' free trial. You will then understand why the principal cities in this country, as well as Great Britain and Continental Europe, find its use advantageous.

Include it in your specifications covering new apparatus, and you will get the BEST at no additional cost to you.

PAGE & QUINLAN

PEABODY, MASS., U. S. A.



NATIONAL FOAM SYSTEM, Inc.,
1632-4 Sansom Street, Philadelphia, Pa.
Several territories available for qualified representatives.

Why Pay More?

—when this new pump embodies all these features at one-half the price

1. *Plenty of Water at Smashing Pressures:*—Delivers two large capacity streams at pressures to 200 pounds.
2. *Extremly Light Weight:*—Won't overload your truck; weighs only one-sixth of average.
3. *Centrifugal Type:*—Takes water from any source—hydrant, lake, cistern, etc.; mud, sand or cinders cause no operating trouble.
4. *Universal Application:*—Can be driven by any car, truck or tractor—direct from motor crankshaft.
5. *Easily Installed:*—Pump can be attached by any mechanic in few hours—ready to run.
6. *Tested and Guaranteed:*—Gives reliable service; built by one of America's largest exclusive pump makers; fully guaranteed; rigidly tested.

The new Barton Fire Pump is handled by practically all the leading fire apparatus people. Consult with them and save money! Or write us direct for our new Bulletin.

AMERICAN STEAM PUMP COMPANY
BATTLE CREEK, MICHIGAN
Sales Offices in the Principal Cities

BARTON *New* **FIRE PUMP**

BADGES of Distinction

Send for Our Catalogue Designs

Everson-Ross Co.
88 Chambers Street
New York City

MORSE
FIRE BOAT EQUIPMENT
Invincible and Callahan Nozzles
Fire Department Supplies

are in use throughout the country and giving unsurpassed service.

Every fire official should be fully acquainted with Morse equipment and have our catalog and other descriptive literature on file for ready reference whenever considering the purchase of new equipment.

You will find that it pays.

Write for Catalog

Andrew J. Morse & Son, Inc.
221 High St. Established 1837 Boston, Mass.

EDDY
Fire Hydrants

Are given preference by so many fire protection and water works men because they know that more than half a century of experience go into their manufacture and they embody valuable and exclusive features.

Write for the Facts

EDDY VALVE CO.
Waterford, N. Y.
James B. Clow & Sons, Chicago Agents

COREY Hydrants as manufactured by "Rensselaer" are being used to fight fire in every State of the Union. Made of the very best material and workmanship.

"The Rolls-Royce among Fire Hydrants"

RENSSELAER VALVE CO.,
TROY, N. Y.

PROPOSED IMPROVEMENTS

Charlotte, Mecklenburg Co., N. C.—City Commissioners making plans for erection of new fire station in Myers Park and one in Seversville section of city, according to reports.

North Sacramento (mail Sacramento), Sacramento Co., Calif.—Fire repartment here working out plans to secure additional fire equipment.

Lavallette, Ocean Co., N. J.—Mayor and City Council making plans for installation of new fire alarm system here.

New Woodstock, Madison Co., N. Y.—Fire district may be created here and $7,000 expended for new pumper.

Providence, R. I.—City Property Committee have requested the aldermen to authorize a loan of $190,000 for fire department improvements, including purchase of property on Rochambeau Ave. for new fire station.

Memphis, Shelby Co., Tenn.—Reports state work will be gotten under way on new fire stat. in near future, replacing present bldg. on Mississippi Avenue. Commr. C. Davis interested.

South Amboy, Middlesex Co., N. J.—Common Council making plans for installation of new fire alarm system, according to reports.

Worthington, Armstrong Co., Penn.—Borough agitating for purchase of a chemical car for fire department.

Riverhead, Suffolk Co., N. Y.—The election to vote on purchase of a pumper at cost of $6,000 will be held July 10.

Wanted

Captain or Assistant Chief in Texas City, must be disciplinarian and drill tower master, use no intoxicants, salary $175 per month, promotion to Chief if qualified. State age, experience. Communications confidential. Address: Frank Baylis, % FIRE ENGINEERING, 225 W. 34th Street, New York City.

5-30, 6-13.

Proposals for Fire Hose

CITY OF COUNCIL BLUFFS, IOWA

Bids received until June 22, 1928

Notice is hereby given that sealed proposals will be received up to 8:00 o'clock P. M., on the 22nd day of June, 1928, at the office of the City Clerk of the City of Council Bluffs, Iowa, for supplying the fire department of said city with one thousand feet of two and one-half inch rubber-lined, cotton jacketed fire hose, equipped with "Rocker-Lug" coupling.

Samples of each brand of hose upon which bid is submitted must be delivered to the Clerk, for the inspection and examination of the Council at the time bids are considered.

Each proposal must include a detailed statement of the terms of the guaranty or warranty upon which the hose will be sold.

Said hose is to be paid for upon delivery and acceptance thereof by the city in warrants drawn upon the "Fire Equipment" Fund, and bidders are advised that the city will deliver to the successful bidder 20 couplings which may be credited on price of above-described hose.

All such bids will be acted upon by the Council at its meeting to be held on the 25th day of June, 1928, after 8:00 o'clock P. M. of said date.

The city reserves the right to reject any and all bids and order new bids.

ELDON C. ANDERSON,
Clerk of the City of Council Bluffs, Iowa.

6-13

Allen Heads Massachusetts Fire Chiefs

Chief Selden R. Allen, of Brookline, was elected president of the Fire Chiefs' Club of Massachusetts at a meeting held in the Parker House, Boston, on June 6. The election was unanimous, following the nomination which was made by Chief George L. Johnson, of Waltham.

Chief Alfred L. Mead, of Quincy, was elected first vice-president; and Chief Frank Tracey, of Woburn, was chosen second vice-president.

Ex-Chief F. Burt Jaquith, of Randolph, was named secretary-treasurer after Chief William H. Hill, of Belmont, declined re-election to this office.

Supt. Henry Thompson, of the Boston Protective Department, was elected sergeant-at-arms and Chief Daniel F. Sennott, of Boston, was made a member of the Board of Directors.

Ex-Chief A. J. Smith, of Stoneham, and E. T. Jewett, chief of fire protection for the Waltham Watch Company, were elected honorary members of the club. Chief Bernard Ames, of Osterville, and Chief Allen A. Kingsbury, of Medfield, were elected to active membership.

An impressive silent tribute was paid to the memory of the late Chief William F. Daley, of Brockton, when the chiefs all rose and stood as a last farewell testimonial to their beloved comrade who had always taken a leading part in the affairs of the club.

Chief Johnson, of Waltham, delivered a touching eulogy in which he stated that "it is given to few men to possess such a lovable disposition and such unqualified leadership as Bill Daley had." Chief Allen spoke of the remarkable friendliness, tolerance, and loyalty of Chief Daley. Chief Casey and Chief O'Hearn, of Watertown, also eulogized the late chief.

A letter was read that had been written by Chief Daley a few days prior to his death. It accompanied an ivory cane sent by Charles Weatherbee, of West Bridgewater, a friend of the chief's, who wished to give the cane to the club to be held by the oldest member. It was voted to accept the gift with thanks and to have the last letter of the chief suitably framed and preserved.

Chief Patrick J. Hurley, of Holyoke, the retiring president, thanked the members for their co-operation and for the past president's badge with which he was presented.

Chief Casey was given a vote of thanks for his work in obtaining an amendment to the pension bill whereby a fire department member upon retirement receives one-half of his salary at time of such retirement instead of half of his salary of the preceding year as formerly. A vote of thanks was given to Hiram R. Packard, Jr., for his gift of a die for a badge.

Reports were made by the secretary-treasurer and the auditing committee. Chief Sewall M. Rich, of Somerville, Chief James M. Casey, of Cambridge, and Chief George L. Johnson, of Waltham, were appointed as a committee to draw up resolutions upon the death of Chief Daley.

Chief William C. Shepard, of Pittsfield, invited the club to come to Pittsfield for a meeting at some future time to take the place of the May meeting scheduled for that city which was cancelled. It was voted to leave the arrangements for the Annual Ladies' Day in the hands of the Board of Directors.

HARRY BELKNAP.

New York City Revises Standpipe Rules

The Board of Standards and Appeals, the appellate body to which redress is taken from administrative orders of the Fire Department, the Building Department and the Tenement House Department, in New York City, has issued the revised or amended fire standpipe rules which were originally adopted in June, 1922, and now bear the new date of May 18, 1928.

The amended rules contain some very important improvements in the standpipe regulations. The continued growth of the city and the ever increasing height of the buildings, together with the mixed or varied occupancies involving additional life and property hazards, have presented problems in fire protection which require greater efforts in the science of fire fighting and fire prevention.

Many interesting and important standpipe tests were made throughout the city on fire line systems which had been installed years ago when the Fire Department had little or no authority over such equipment. Defects and weaknesses in method of installation, design and usage through years of service formed the basis of the amended rules.

In amending the rules and making them more stringent, the Board of Standards was guided to considerable extent by Inspector Peter Maher of the New York Fire Department's Bureau of Fire Prevention. Chief Kenlon, too, had much to do with the changes and insisted on the retention of certain improvements which some of the building and real estate interests bitterly but unsuccessfully opposed. Three recent fires in New York in which the standpipe systems were important factors also actuated the Board in arriving at some of its most drastic changes. Those fires were the Equitable Building in February, 1926, the R. G. Dun Building in April, 1926, and the Sherry-Netherlands hotel fire in April, 1927.

The chief principles underlying the amendments in the rules, are:—

1. That standpipe systems be standardized.
2. That standpipe installations be simplified.
3. That provision be made to segregate any and all standpipe risers, or cross connection lines from other sections of the system in case of a break in the line.
4. Accurate and sufficient strength in all piping, valves and fittings.
5. A method of assuring at least three standard hose streams under at least eighty pounds pressure on all floor for any length of time regardless of height.
6. Ample and sufficient water for fire extinguishing purposes, with the addition of the house tank, as auxiliary supply for use of the building fire brigade pending the arrival of the Fire Department.
7. Proper number of siamese in relation to the number and diameter of the fire line risers.
8. A more complete rule in reference to buildings in course of erection.
9. An accurate and reliable means of communication by telephone and gong signal system throughout the building at all hours.
10. An improved method of locating gate valves, hose tees, fire pumps, emergency drains, yard hydrants and post indicator valves in accordance with Fire Department method of operation.
11. To assure proper upkeep and maintenance of the standpipe system, that a responsible person be examined and certified as such by the Fire Department.

WM. J. DALY.

FALSE ALARMS

FINE FOR LOCAL COLOR

Fire stations are not what they used to be. They have become modernized, and if truth must be known, a better building has resulted. But in order to have the firemen mix with the "blue bloods" of society, it has been necessary

—Drawing by "Art" Espey

Local Color: for the English Type Station

to have the fire station conform, in design, with the homes of the section. Something like the latest craze of matching ladies pocketbooks with shoes, or cigar lighters with cigarette cases, or golf stockings with sweaters.

Perhaps this idea may be carried just a step too far, but for the scenic effect, why not have firemen match the station in which they are quartered.

It is not such a very wild idea. It might even be termed an excellent plan.

If quartered in an English type fire station, why not become thoroughly English. If housed in a Spanish-type bungalow, then a costume such as is illustrated in the lower right-hand corner would be in order. It will add to the local color, one reads so much about.

WELL TRAINED

Jones is always bragging about his kid. When he approached a group at the club, they anticipated what the topic of conversation would be.

"Well, what has your youngster done now?"

"He set the house afire with my cigar lighter."

The fact that a traffic policeman whistles at his work is no reason to believe he is good natured.

WORKING AHEAD

When Tom, who was on the day shift called to get McGregar, who was also on the same shift, so that they could walk down to the station together, he found McGregar beating his son. Tom was surprised.

"Gee whillikans, Mac, what are you beating the boy for?"

"He gets his report card tomorrow."

"Well what of that?"

"I'm on the day shift now and when I get home, he's generally asleep, and I know that I'll have to beat him after I see his report card."

HELPED THE CAUSE

A public meeting had been held in a large city to support the cause of fire prevention. The main subject was that of forest fires. The lecturer had reached the climax of his talk.

"I venture to assert that there isn't a man in this audience who has ever done anything to prevent the destruction of our vast forests."

A man in about the central part of the auditorium arose and said in a rather timid tone:

"I've shot woodpeckers."

A HINT FOR CHIEFS

The parking problem ain't what it used to be!

Conditions are becoming more acute each day, and the chief is at his wits' end to find a solution. But perhaps he can get an idea or two from the following advertisement that was inserted by the superintendent of public works in a Salamanca, N. Y. newspaper:

"Main street will be washed shortly after 11 p. m. this evening. No parking will be allowed on this street during this time."

LOOKING AHEAD

All the boys were shooting fireworks on their way from church and Sandy looked on with envy. The Fourth of July was but three weeks off, but the sound of firecrackers had already started. When he reached home he asked his father:

"May I have some money to buy firecrackers?"

"Of course not, my son. What do you think I taught you to snap your fingers for?"

"I hear Hardup's shop was burned last night. They say one could see the fire a long way off."

"Yes, I saw it six months ago."

TIME TO CALL

They were a young newly-wed couple. Shortly after they had returned from the honeymoon the husband fell sick and the young wife was very much worried. She phoned a very busy and well known doctor to come at once.

"What is the temperature?" the doctor asked, as he thought he could prescribe over the phone and thus save the delay of a call.

She took the temperature and then said sweetly, "It is 138."

"Madam," replied the physician, very much surprised, "you don't need a doctor, you want the fire department."

SPLENDID THOUGHT

When the Eastern Regulars special left last year for Portland, Ore., it had a collection of chiefs from almost every part of the east. Some had never been on a long trip before. One chief was particularly delighted when he found his shoes shined each morning when he tumbled out of his berth.

When they arrived at Portland, this chief and his wife registered at a first-class hotel. Never had the couple seen such splendor, deep cushioned seats, marble trimmings, and gold paint in any hotel.

Just before retiring the wife said:

"Why don't you leave your shoes in the hall so that they'll be shined?

"I don't think they'll shine them in this place, Marie. I'm afraid they'll paint them with gold paint here."

Civilization appears to progress from all fours to plus-fours.

TWO PLACES AT ONCE

All hands were required to fight a forest fire in one Western state. Having nothing else to do, Mike volunteered as a fire-fighter. When the battle was over Mike was given railroad fare back to his town. The train was to stop fifteen minutes at a certain station to let a flyer go by and Mike planned to have his breakfast there.

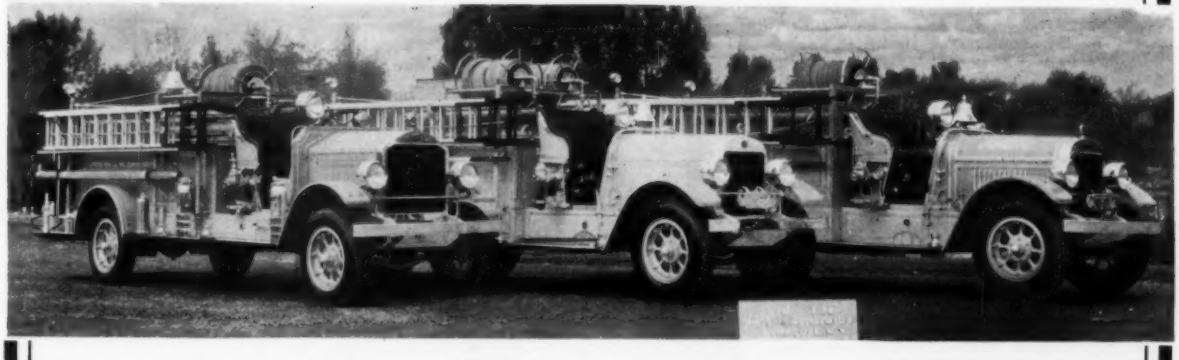
As he was at the station lunch counter, the train started to leave.

"Hould on," shouted Mike as he ran after the train, "hould on, ye murthen old stame injin—ye've got a passenger on board that's left behind."

—Drawing by "Art" Espey

Local Color: for the Spanish Type Bungalow Station

The Greatest Value in America!



350 - 500 - 600 - 750 Gallon Triple Combinations

THE Sanford MOTOR TRUCK

With Booster or Chemical Tanks
Also Ladder Trucks and Other Types
Ask the Owner! Complete Information on Request

Sanford Motor Truck Co.
Syracuse, N. Y.

SANFORD SERVICE SATISFIES

Worcester Alarm Signals

Carry great distances above the din of traffic. Sound is penetrating, but not piercing. These signals are made to meet local conditions. Four sizes. Ask for catalog R-51.

Union Water Meter Company
Worcester, Massachusetts
New York, 50 Church St. Phila., 411 Bulletin Bldg.

UNION

Water Meters - Chronometer Valves
Easy Turning Stops - Pressure Regulators
Presses for Lining Pipe - Alarm Signals

TRUSCON COPPER ALLOY FIRE DEPARTMENT STEEL DOORS

Let Truscon Solve Your DOOR Problem

Engineering Service and Estimates Free

TRUSCON STEEL CO., Youngstown, Ohio

BRAXMAR
BADGES

have been the recognized standard for fire departments for almost 50 years. Used everywhere. More than 900 designs. Send for illustrated catalog and prices.

C. G. BRAXMAR CO.
242 W. 55th St., N. Y. C.

MATHEWS
(Reg. U. S. Pat. Off.)
FIRE HYDRANTS
for
DOMESTIC
and
HIGH PRESSURE
Service

NOTE—

The positive waste value.

All operating threads are dry, being above the stuffing-box.

No toggles, no small, quick-wearing parts.

All moving parts are bronze or bronze-bushed.

The outside casing permits replacing a two-way standpipe with a steamer and two-way standpipe without digging up the ground.

An easily installed
EXTENSION SECTION
readily adapts them to new grade.

VALVES and BOXES
CAST IRON PIPE
(*Sand-Cast or "Sand-Spun"*)
FITTINGS

R. D. WOOD & CO., Phila., Pa.

THE BLANCHARD "FLEXI-COT"
provides for speedy yet safe humane handling of the injured.

Quick, Safe handling of the injured may save a life or prevent lifelong disability. The BLANCHARD FLEXI-COT is the apparatus approved and adopted by well-equipped departments.

"Take a tip from Blanchard and save your men"

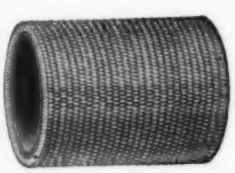
Manufactured by

ARTHUR H. BLANCHARD
25 Hampshire Street Cambridge, Mass.

Sturdy Fire Hose with Solid Woven Multiple Jacket

The record of Quaker Hose in fire department service in the principal cities certifies to its durability and reliability in fire fighting.

Made with a tough inner tube to stand high pressures and a strong circular woven jacket to resist abrasion.



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Wissinoming, Philadelphia

Branches: New York, Chicago, Pittsburgh, San Francisco

New Victor Gas and Fume Mask

Better Rubber. Longer Life Better Fitted. Moulded to Fit the Face. Better Vision. Renewable Lenses. Better Air. Better Work. Low Prices. High Quality.

Over 5,000 Victor Gas Masks in Service

Full Line Fire Dept. Supplies and Equipment.

New 43 Edition Catalog on Request

The Woodhouse Mfg. Co., Inc
156 Chambers St., New York

D. A. Woodhouse, Pres. and Gen. Mgr. George J. Kuss, Vice Pres. and Treas.

KilSoot
TRADE MARK REG.

Puts Out Chimney Fires

A better, safer and surer way to prevent and extinguish chimney fires is offered to fire chiefs and fire prevention bureaus in the use of "Kilsoot."

We repeat our offer to send liberal samples and full details regarding this remarkable chemical product — gladly furnished upon request.

"Make KilSoot Standard Equipment!"

KILSOOT CHEMICAL COMPANY
1834 Broadway, New York, N. Y.

Should Firemen Inspect Sprinklers?

(Continued from page 500)

the premises. During other hours, however, a fire may be burning in some remote part of the building with no external indication, it may already be under control, or the alarm may be false.

Promptness in Preventing Damage

When the cause of the alarm is not apparent, the officer should station a man at the control valve and make a prompt search of the building to discover the fire or to locate the burst head or pipe which caused the alarm. If the alarm was caused by a burst head or pipe, or if the fire is already out, no time should be lost in shutting off the water and stopping all unnecessary water damage. When the water is cut off, the two-inch drain pipe should be immediately opened to drain the system and prevent the unnecessary flow of water.

When the fire is small enough to be controlled by chemical lines, considerable water damage can sometimes be prevented by shutting off the water. No time should be lost in covering stocks, mopping up the water, and carrying on other salvage operations.

If the fire has gained considerable headway, the sprinkler system may be utilized as an effective means of delivering the water where it will be most effective, and no time should be lost in connecting hose lines into the fire department connection. Some of the larger departments have an iron-clad rule that the first engine company in shall connect to the fire department connection. The only time an officer is justified in entirely neglecting the sprinkler equipment is when the fire has involved such a large area and has opened so many heads that one engine connected to the system could not furnish sufficient water. With ordinary occupancies, this condition will seldom occur.

Amount of Pressure Required

The officer should be careful in ordering pressure on a system. Twenty-five pounds on the floor where the water is to be delivered is sufficient; a greater pressure may result in tearing the piping down. Tests made by the Underwriters Laboratories show that sprinkler distribution is not improved by pressure above 25 pounds. If a fire pump is part of the system, it should be started promptly and used to increase the supply to the system.

Value of Sprinkler System in Basement Fires

A sprinkler system is especially useful in combating a fire in a basement as water can be delivered through fused heads at points in the basement which could be reached by no other means because of heat or smoke. In laying into a basement fire in a building equipped with automatic sprinklers, the first line may be used to cover the fire and prevent its extension, and the second line attached to the siamese connection.

For a fire in a tall building where considerable time is required to take lines of hose to the upper floors and attach them to standpipe outlets, the first line in should always be connected to the system and water started so that the fire can at least be held in check until the hose lines are in action. If the fire has involved a considerable area, a second line should be connected to the system.

For fires in buildings of ordinary height, the first line in may be used to cover the fire, but no time should be lost in connecting into the system.

In numerous instances, automatic sprinkler systems have been the means of protecting a building from severe exposure, and the officer should keep this possibility in mind.

Inspect Fully Before Leaving After Fire

The fire department should always replace fused heads and see that all valves are opened and that the system is fully restored before leaving. For dry-pipe systems, this will require resetting the dry-pipe valve. This important work cannot be left to the tenant as numerous cases have proved. One notable example occurred in a department store in Providence, R. I. Here, the sprinkler lines that opened for the first fire were shut down, and a second fire which started in about an hour after the first gutted the large building and caused a million dollar loss. The insurance companies require the owners of sprinkler systems to carry a few heads in reserve, but this is not always done, or the extra heads may be misplaced. Many departments make it a practice to carry a number of heads on the ladder truck.

Fatal Apparatus Crash in Charlotte

One captain was killed and three firemen were injured when a truck from the Belmont fire station, Charlotte, N. C., crashed just outside the city limits into a commercial truck.

The captain was seated next to the driver. He was thrown over the dash and beneath the truck when the accident happened. One injured fireman was on the rear step holding the hand rail. He did not leave the truck but his back was severely wrenched.

Service at the station was disrupted but a short time. Apparatus that was held in reserve was rushed there to replace the damaged truck.

D. G. SPENCER.

There's Plenty to Do When an Oil Well Takes Fire

There is work for everybody when a fire occurs in an oil well section. In this instance, men are busy placing sand bags to prevent the fire from spreading from one well in Rumania to another. If this method were adopted in American oil fields, an unbelievable number of sand bags would be required.

New Jersey and New York Volunteers Meet

A meeting of the New Jersey and New York Volunteer Firemen's Association was held in Riverside Borough, N. J., on May 25.

Battalion Chief John J. Wilkinson of Newark Fire Department was the main speaker. He stressed the need for careful, thorough, scientific study and training. He said that a few years ago, the main qualification for a good fireman was a strong back, but now it is the mental training that constitutes an important factor. Without training, a fire department would be nothing but a disorganized mob. He said:

"If a paid fireman who does nothing else for a livelihood requires training and education in his work, how much more is training and knowledge essential to the well being of the volunteer firemen who works at some other trade or profession."

Chief Fisher of Ridgefield Park, chairman of the convention committee, reported that all was in readiness for the convention to be held on July 14 in Ridgefield Park.

After the meeting, the members and their guests were treated to a vaudeville show.

Burlington Host to Chiefs

(*Continued from page* 498)

First Assistant with Joseph Carland (call) as Second Assistant. These men held their position until April 25, 1904. When Charles A. Niles was appointed Chief and Carl D. Stockwell as Assistant Chief, during Ex-Chief Niles Administration, the City Charter was changed at Montpelier whereby the Department was taken out of politics and placed under Civil Service. The appropriation at this time was $16,000 a year. In February, 1911, the first piece of motor apparatus was purchased and installed in the department, an American-LaFrance Combination Type 5, No. 10. At this time the department consisted of twenty-five full paid and fifteen call men. On October 30, 1914, Chief Niles resigned, the present Chief Carl D. Stockwell was promoted to Chief and W. G. Thomas was made Assistant Chief. During the year 1917 Assistant Chief W. G. Thomas resigned and Captain W. G. Carty was appointed to the position. The appropriation this year was $30,500. On May 14, 1918, the third piece of motor apparatus was delivered to the department. On April 11, 1920, the fourth piece of motor apparatus was delivered and put in commission and consisted of one Seagrave 750-gal. centrifugal pump and hose car.

On April 5, 1924, an 85-foot Seagrave tractor-drawn aerial ladder truck was installed and on March 1, 1925, a 750-gallon Seagrave pump with 80-gal. booster tank was installed which completely motorized the department. The last two horses were turned out on a farm for an easy time the remainder of their lives. The department now consists of a new Central Station costing $125,000, housing Engine Co. No. 1 and No. 2, also the 85-foot Seagrave tractor-drawn aerial ladder truck and Chief's car. Station No. 2 is occupied by a combination auto truck. Station No. 3 is occupied by a combination auto truck. There are thirty-seven full paid men in the department and no call men. The annual appropriation was $65,000 last year.

The Water Supply

The water supply of the city is derived from Lake Champlain and is pumped to a reservoir 300 feet above the level of the lake with capacity of 7,000,000 gallons. There is a modern filtration plant. The pumpage for the year 1926 amounted to 534,649,000 gallons which was an increase of 12,823,000 over the pumpage for 1925.

The water works are owned and operated by the city. Construction started in 1867 and from 1888 to 1905 F. H. Crandall, a former president of the New England Water Works Association, had general supervision. There are both high and low service mains, the high service district being supplied from the low service by a motor in the low service main at the reservoir outlet. There is a standpipe a quarter mile from the reservoir.

A pumping station located about 200 feet from the shore of the lake and at a point three-quarters of a mile from the congested value district of the city was built in 1867-8. The equalizing reservoir is in two parts, one with a capacity of 3,000,000 gallons built in 1867 and repaired in 1890, and the other part with capacity of 4,000,000, built in 1888. The reservoir is located in the eastern part of the city. Post type hydrants are used and the pressure is fair to good.

In 1918 two additional pumps were installed. These are centrifugal pumps, one of 720,000 gallons capacity, and the other of 2,500,000 gallons capacity.

Topography of City

Burlington is a lake port and a lumber center. The surface of the city is hilly, but the grades are easy. Elevations in the congested value district range from 53 ft. to 137 feet and from 9 ft. to 284 feet throughout the city. Lake Champlain is 99 feet above the level of the sea. Streets range in width from 65 feet to 100 feet and there is one street that is 35 feet wide. The prevailing wind is from the south. Temperatures are severe in the winter and high winds are frequent.

The congested value district extends along Church Street and embraces Pearl, St. Paul, College, Pine, King, Church, Main, and South Winooski Streets. The lumber, wood working, and manufacturing districts extend along the shore of the lake for a considerable distance.

The new Memorial Auditorium and the new City Hall were completed this year. Municipal government is conducted by a mayor and board of twelve aldermen. The city is the largest in the state and is the county seat of Chittenden County.

The first permanent settlement at Burlington was on June 7, 1763. It was organized as a village on March 19, 1774, and incorporated as a city on February 21, 1865. The name Burlington comes from a Mr. Burlin who was one of the early settlers.

There are 60.122 miles of streets in the city of Burlington.

The principal hotels are the Hotel Vermont, the Hotel Van Ness, and the New Sherwood Hotel. There are a number of attractive parks, a tourists' auto camp, and a municipal airport.

Booklet Issued on Prone Method

Instruction in approved methods of resuscitating victims of electric shock, gas poisoning and drowning is being extended to the employees of electric light and power companies through the National Electric Light Association which has recently issued another booklet on the Prone Pressure Method in cooperation with the American Gas Association.

Eleven national organizations have given their approval to the resuscitation method adopted by these associations. The technic has been developed after years of study and has been decided upon as the most efficient means of preserving life in emergencies that have resulted in cessation of breathing.

The rules for resuscitation by the Prone Pressure Method, as described in the booklet have been approved by the American Gas Association, American Red Cross, American Telephone and Telegraph Company, Bethlehem Steel Corporation, National Electric Light Association, National Safety Council, United States Army, U. S. Bureau of Mines, U. S. Bureau of Standards United States Navy and the U. S. Public Health Service.

Speakers are sent out by member companies and associations to instruct groups of boy scouts and girl scouts, and industrial workers in this method of resuscitation.

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The City of Wheeling just purchased 5,000 feet of Bi-Lateral Fire Hose coupled with rocker lug couplings. This city purchased 5,000 feet last year and it is believed that as soon as their department is equipped with this improved construction in fire hose they will be able to cut their hose expense to less than half of what it has been previously. Let the BI-LATERAL FIRE HOSE COMPANY tell you why this may be true.

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please write us and we shall be glad to have the right manufacturers provide you with complete specifications and prices for your consideration. This service won't cost a cent nor place you under any obligation whatever. We just want to cooperate both with you and with manufacturers in every possible way.

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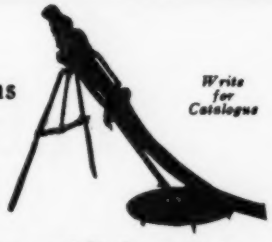

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are indispensable where high pressure service is required. With Eastman equipment any size streams can be easily handled by one man.

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then—

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Say—

then—

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WHEN you buy fire hose it isn't enough to know what the materials are. You have to know more if you want to buy efficiently and avoid the necessity of frequent repeat orders.

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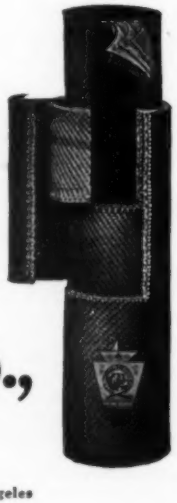

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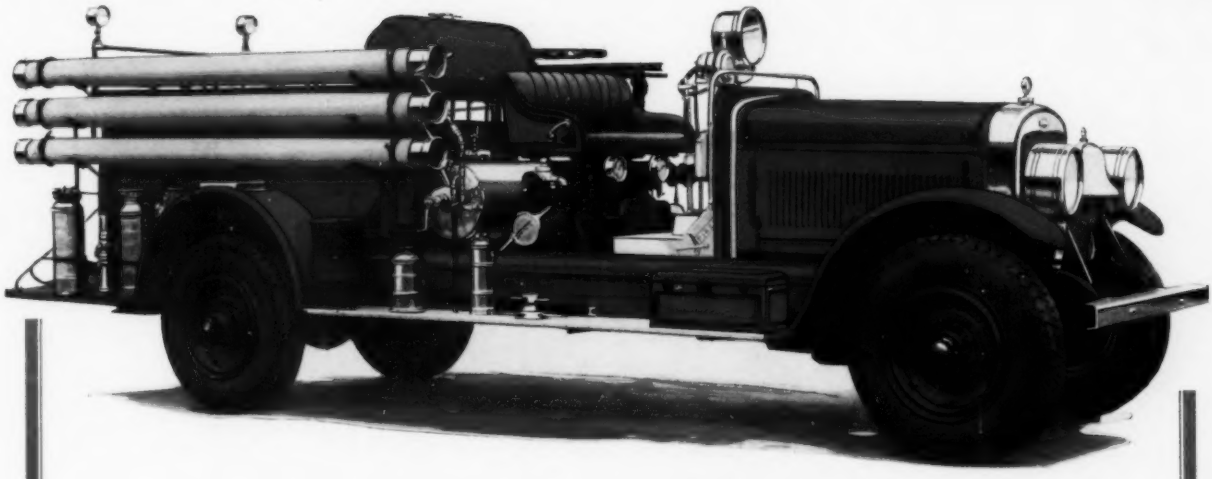

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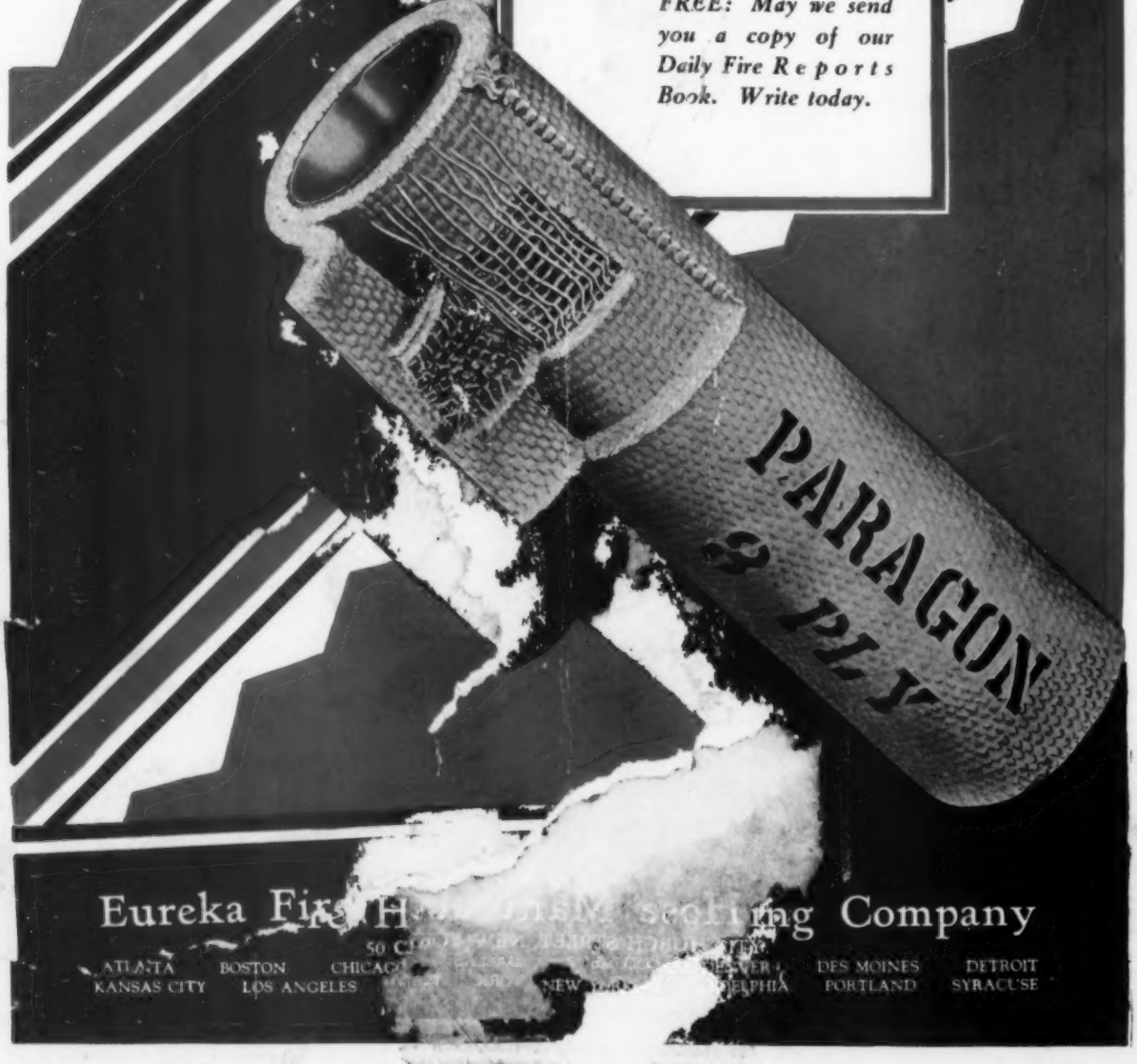

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